
KIRKPATRICK & LOCKHART LLP

ONE INTERNATIONAL PLACE
BOSTON, MASSACHUSETTS 02110-2637

TELEPHONE (617) 261-3100
FACSIMILE (617) 261-3175

October 15, 1996

VIA FEDEX

William G. Little, Esq.
Associate Attorney
New York State Department of
Environmental Conservation
Division of Environmental Enforcement
Onondaga Lake Unit
50 Wolf Road, Room 410A
Albany, NY 12233-5550

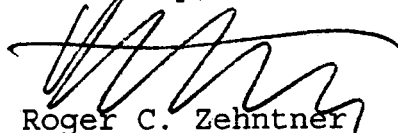
Re: Carrier Corporation - Response to NYSDEC Requests for
Additional Information Dated August 12, 1996

Dear Mr. Little:

This letter is in response to your letter dated August 12, 1996 requesting additional information regarding Carrier Corporation's Thompson Road facility and the Geddes Street location which was sold by Carrier in 1949. Your requests for additional information and Carrier's responses to these requests are subject to the same qualifications and objections that Carrier originally set forth in its June 29, 1995 response to your initial 104(e) request for information. Carrier will not reiterate those qualifications and objections here but merely incorporates them by reference in this response.

Taking each of your requests for information in turn, therefore, Carrier provides the enclosed responses.

Sincerely,



Roger C. Zehntner

Enclosure
CC: George A. Shanahan, Esq.

B01-132320.1

488982



**CARRIER CORPORATION'S RESPONSES TO
NYSDEC REQUESTS FOR ADDITIONAL INFORMATION
DATED AUGUST 12, 1996**

Thompson Road Plant

1. Please provide a plan view(s) of the site showing the location of present and historic waste process streams, treatment plants, storage facilities and discharge points.

As the New York State Department of Environmental Conservation ("NYSDEC") may be aware, Carrier Corporation recently underwent a RCRA facility "corrective action" inspection requested by the U.S.EPA in a letter dated August 13, 1996 (Attachment 1). In response to that request for inspection, a team of Carrier facility and technical personnel worked several days to prepare for the inspection and to respond to the areas of inquiry listed in the August 13 request for inspection. This inspection and information gathering was conducted on August 22, 1996 by U.S.EPA's contractor, A.T. Kearney, Inc.

Following the inspection, A.T. Kearney prepared an extensive draft report on the very type of additional information now requested by NYSDEC. For NYSDEC's information, therefore, we have attached the draft A.T. Kearney report (Attachment 2) which describes the site, environmental setting, operations and process descriptions, waste management practices, history of releases and various past and present "solid waste management units" and so-called "areas of concern." In this report, there is also included a site map which specifies the locations of the various

solid waste units and areas of concern. Carrier assumes that this A.T. Kearney report provides sufficient information in response to NYSDEC's first request for additional information.

Note that there are some inaccuracies in the A.T. Kearney report and other points that may require a Carrier response, and Carrier, for the record, will shortly be clarifying these in a letter to U.S. EPA. Carrier will also provide NYSDEC with a copy of this clarification letter.

2. Please provide a list of documents submitted to EPA and the Department as part of the RCRA active facility action. Please include all reports and data; however, it is not necessary to include correspondence. Please include the dates of these documents and the name of the persons, if known, to whom they were submitted.

As an initial point of clarification, Carrier understands, based on conversations with the NYSDEC, that the "RCRA active facility action" refers to the closure of the below-grade concrete tanks located north of building TR-6. In that regard, Carrier's review of the files indicates that the following reports and data regarding this closure project were submitted to the NYSDEC:

- Closure Plan For Hazardous Waste Storage Facility.
Submitted to George Heitzman, NYSDEC, by letter dated June 14, 1985.

- Revised Closure Plan For Hazardous Waste Storage Facility, dated November 6, 1985. Submitted to George Heitzman, NYSDEC, by letter dated December 18, 1985.
- Revised Closure Plan For Hazardous Waste Storage Facility, dated February 4, 1987. Submitted to Michael McPeck, NYSDEC, by letter dated February 5, 1987.
- Revised Closure Plan For Hazardous Waste Storage Facility, dated April 2, 1987. Submitted to Michael McPeck, NYSDEC, by letter dated April 8, 1987.
- Final Closure Certification Report For the Hazardous Waste Storage Facility at Carrier Corporation's Thompson Road Facility, dated April 18, 1988. Submitted to Tom Killen, NYSDEC, by letter dated May 2, 1988.
- Revised Annual Hazardous Waste Management Facility Financial Assurance dated April 26, 1990. Submitted to Margaret E. O'Neil, NYSDEC, by letter dated May 9, 1990.
- Monitoring Well Sampling Results For February and June, 1990. Submitted to Brian Rodgers, NYSDEC, by letter dated August 13, 1990.

- Monitoring Well Sampling Results For February, 1991.
Submitted to Brian Rodgers, NYSDEC, on September 23,
1991.

3. Please provide a detailed description of industrial waste management practices prior to 1980, to the best of your company's ability. Include in your description a discussion of the final disposition of the north and south waste pits and drain¹ storage area.

I. Industrial Waste Management Practices Prior To 1980

A. Introduction

As an initial matter, it must be noted that this response concerns industrial waste management practices from approximately 1950 to 1980. Records of industrial waste management practices are sparse, particularly for the years 1950 to 1970. This should not be surprising because there were few, if any, environmental laws governing industrial waste management or requirements to maintain records of industrial waste management as there are today.

The information reported herein was taken from records generated primarily after 1970. While this information does not span the entire period of Carrier's operations at the Thompson Road site, it is believed to indicate generally the kinds of wastes generated by Carrier's manufacturing operations at various times throughout Carrier's history at the site.

¹ Carrier understands that the word "drain" is a typographical error and that NYSDEC meant to use the word "drum".

B. Manufacturing Activities and Description of Industrial Wastes

Since Carrier commenced manufacturing activities at the Thompson Road site, it has engaged in a number of manufacturing processes related to the production of commercial and industrial refrigeration and air conditioning components. These processes have included sheet metal manufacturing, metal forming and machinery, metal cleaning and degreasing, painting, coating (phosphatizing and chromating), brazing, welding and soldering, foam insulation and other manufacturing support operations.

Carrier's industrial wastes can be grouped into six general categories: (i) mixed acids and alkalis; (ii) water soluble coolants; (iii) solvents and thinners; (iv) solvent based paint wastes; (v) solder flux; and (vi) miscellaneous liquid sludges. These wastes are described in the enclosed table (Attachment 3). This table also identifies locations/units where these wastes were collected for off-site treatment, disposal or destruction.

C. Waste Management Practices 1950-1970

As explained previously, information regarding waste management practices at the Thompson Road site is sparse. What information is available indicates that there were at least two methods for industrial waste disposal. Acid and alkali wastes, generated primarily in building TR-1 were accumulated in two 8,000 gallon below-grade concrete storage tanks located to the west of building TR-1. These tanks were present when Carrier

0-54

purchased the site from General Electric. These wastes were periodically removed and disposed of at an off-site location. Oily wastes, comprised predominantly of water soluble oil coolants (greater than 95 percent water), and a much smaller volume of lubricating oils were accumulated in a 3,000 gallon tanker trailer spotted on-site in an area identified as the North Plaza, located north of building TR-3. These materials were periodically removed and disposed of at an off-site location.

D. Waste Management Practices 1970-1979

Carrier's waste management practices became increasingly proceduralized through the 1970s. The Plant Engineering Department prepared the site's first procedures for waste collection and disposal in late 1970. These procedures were periodically revised to identify new waste collection points, new wastes and additional waste management requirements.

Over the years 1970 to 1979, a total of five waste collection areas were established at the Thompson Road site. These were: (1) the north and south storage tanks west of building TR-1; (2) the waste lubricating oil settling tank at building TR-10; (3) the North Plaza collecting point, east of building TR-2; (4) the drum storage area, west of building TR-14; and (5) the north and south collecting tanks north of building TR-6. These units received wastes from other facilities at the Thompson Road site. Each building had a "drop area" inside the building where wastes were assembled. These wastes were removed periodically by the operating group to the appropriate waste

collection point. These waste management practices for these collection points are described in the following sections.

1. North and South Storage Tanks at Building TR-1

The initial waste management procedure called for the accumulation of liquid wastes in two 8,000 gallon below grade concrete storage tanks located to the west of building TR-1. These tanks were present when Carrier purchased the site from General Electric, and they were used by Carrier as waste collection units for acid and alkaline wastes prior to 1970. Between approximately 1970 to 1978, the south tank was used for the collection of waste coolants (water soluble oils), lubricating oils, kerosene and various solvents. In 1978 the south tank was again used to collect acid and alkaline wastes, primarily from operations in building TR-1. From the early 1950's until approximately 1979, the north tank was used for the collection of metal cleaning and surface preparation wastes including waste acids, waste alkalis and used Oakite products.²

After 1970, waste oils (except for lubricating oils discussed below) were removed from the site for recycling and energy recovery. Acid and alkaline wastes were taken to off-site disposal facilities.

² Oakite is a manufacturer of various cleaning agents and metal surface preparation materials.

2. Waste Oil Settling Tank

In 1971 Carrier began segregating used lubricating oils from the water soluble oils. The lubricating oils were accumulated in a waste lubricating oil settling tank which was located near the southwest corner of building TR-10. These oils were blended with fuel oil and burned as fuel for Carrier's boilers. In May, 1973, the waste collection procedure was revised to add a requirement that used oils directed to this collection tank could not contain solvents or dissolved contaminants. Oils contaminated in this manner were to be rerouted to the south tank near building TR-1 for off-site disposition.

The practice of blending lubricating oil for on-site fuel purposes was discontinued in approximately 1980. Thereafter, these lubricating oils were also taken off-site for disposal.

3. North Plaza Collecting Point

The North Plaza collecting point was located near the east side of building TR-2. This unit came into use in approximately May, 1973, and was used as the collection point for drums of grinding sludge and paint sludge from overspray in water wash paint booths. In early 1974, these wastes were collected in one cubic yard mobile containers and collection and storage of these wastes in drums was no longer done. Containerized wastes collected in this area were periodically removed for off-site disposal.

4. Drum Storage Area

The drum storage area was located to the west of building TR-14. This unit came into use in approximately May, 1973, and held drums of industrial waste that were accumulated and stored until they could be shipped off-site for treatment or disposal. All types of drummed waste, except for paint sludges and grinding sludges were stored here. Procedure required all drums to be sealed and tightly secured, free of leaks or damage, marked as to the contents and labeled in accordance with Interstate Commerce Commission requirements. Materials collected here included organic cleaners and strippers and flammable solvents and thinners.

In June, 1979, the Plant Engineering Department issued a hazardous waste disposal procedure. This procedure superseded the industrial liquid waste disposal procedure for management of hazardous wastes accumulated in drums. This procedure expanded the requirements for drum management, requiring that all drums meet DOT specifications and assigning Plant Engineering the responsibility for establishing a central collecting point for temporary on-site accumulation of drummed wastes.

5. North and South Collecting Tanks at Building TR-6

In 1978 two below-grade 20,000 gallon concrete tanks located on the north side of building TR-6 were refurbished for use as waste collection units. The north tank was used to accumulate mixed acids and alkalis for disposition off-site. The

south tank was used to collect water soluble coolants and oils for disposition off-site. When these TR-6 tanks came into service, the south tank at TR-1 was used to store mixed acids and alkalis instead of water soluble oils as it had previously.

II. Disposition Of TR-1 Tanks And Drum Storage Area

With respect to the final disposition of the north and south waste tanks and drum storage area, Carrier's search of the records uncovered no information specifically detailing Carrier's final disposition of these units. However, Carrier can provide a general description of the disposition of these tanks. These descriptions are provided in the following sections.

A. Disposition of the TR-1 Tanks

Carrier ceased use of concrete tanks outside building TR-1 in approximately 1979. When Carrier dismantled the tanks, water that had accumulated inside them was removed. The tanks were then steam cleaned and rendered unusable by knocking in the first few feet of the concrete walls and puncturing holes in the bottom of the tanks. The tanks were then filled with crushed stone and the area was covered with asphalt. This is the condition which exists in 1996.

B. Disposition of the Drum Storage Area Near Building TR-14

The drum storage area near building TR-14 was used until a central drum storage building was constructed to meet the newly promulgated RCRA regulations in 1980. This new facility

was located in a portion of the former drum storage area and is still used by Carrier. Drum storage was transferred to the new facility.

Geddes Street Location

1. Carrier's response states that the facility was sold in or around 1949, but that Carrier remained in the plant under a lease arrangement until the fall of 1972. To whom did Carrier sell the facility, and with whom did Carrier have the lease arrangement?

Carrier has searched its files for available Geddes Street sale and lease documents. Based on these documents, Carrier has pieced together a partial history of the sale and subsequent leasing of Geddes Street. However, it appears that not all the documents are available that would be necessary to give a complete history. The following, therefore, is the history that Carrier is able to provide so far:

In July of 1949, Carrier sold the Geddes Street facility to Webb & Knapp, Inc. In September 1949, Carrier leased back portions of the facility under a number of separate leases.

Carrier leased the Office and Development Buildings from Kerby Realty Foundation for fifteen years, from September 1, 1949 to August 31, 1963. These premises were sold on December 8, 1958 to John T. Javatile, of the Bronx, New York. Javatile sold them to Aldred Investment Trust. On January 7, 1959, Aldred Investment Trust conveyed them to a subsidiary, Aldred Realty Corporation. This series of sales also pertained to properties

covered by a lease of "June 8, 1953." That lease was not found in our search, so it is not clear what it covered.

Carrier leased Building No. 1 and the Power House from Kerby for 4 1/4 years, from September 1, 1949 to October 31, 1953. This lease was extended one month to November 30, 1953. There was an option to renew for a five year period, but it is not clear whether this option was exercised.

Carrier leased Buildings No. 2, V, G and the parking lot from Magnolia-Marcellus from September 1, 1949 to September 30, 1950. This was extended through September 30, 1951. There was apparently another lease from September 1, 1951, but that document was not found in our search.

Carrier leased the sixth floor of Building No. 2 from Magnolia-Marcellus from September 1, 1949 to November 30, 1953. There was a right to renew for five years, but it is not clear whether this option was exercised.

Prior to the July 1949 sale, Carrier had leased a south portion of the second floor of Building No. 2 to Webb & Knapp. Webb & Knapp assigned the lease to General Electric. In November 1949, G.E. consented to the termination of this lease conditioned upon the execution of a lease for the entire third floor. Carrier then sub-leased the entire third floor to Magnolia-Marcellus, from December 1, 1949 to September 30, 1950. Magnolia then assigned this sub-lease to General Electric.

Carrier leased the third floor of 300 South Geddes Street to Agway, Inc. for the period of March 1, 1966 through June 30, 1966. The lease was renewed through October 31, 1966.

The above documentation is all that Carrier has been able to find so far concerning the sales and leases related to the Geddes Street location.



Attachment 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION II

290 BROADWAY

NEW YORK, NEW YORK 10007-1866

AUG 13 1996

Ms. Beth Hubben
Carrier Corporation
P.O. Box 4804
Carrier Parkway
Syracuse, New York 13221

Re: Carrier Corporation; Syracuse, New York
EPA I.D. No. NYDG01317072
RCRA Facility Assessment; VSI Notification Letter

Dear Ms. Hubben:

Under the 1984 Hazardous and Solid Waste Amendments (HSWA), a RCRA Facility Assessment (RFA) is required of your facility. The objective of this assessment is to determine whether releases of hazardous waste or hazardous constituents have occurred or are occurring at your facility. The assessment will determine if any such releases require further investigation to determine the need for corrective action.

...

Your facility has generated, treated, stored, or disposed of hazardous waste subject to RCRA. You have filed RCRA permit-related information regarding your hazardous waste management activity in the past. On the basis of the information which you submitted in the past, U. S. Environmental Protection Agency (EPA) is required to evaluate whether or not releases of hazardous waste have occurred at your facility and, if so, the extent of any such releases. If significant releases are discovered, EPA has the authority to require that you address such releases. Follow-up regarding sites like yours that are no longer seeking a permit and which do not appear to have any significant releases of contamination based on the information currently available has not been a high priority in the past. However, EPA's assessment of your facility is being completed at this time in order to make a final determination regarding potential contamination at your facility.

The first step of the RFA is a Preliminary Review (PR) of available file material about your facility from the files of the USEPA and the New York State Department of Environmental Conservation (NYSDEC). A PR is being completed by representatives of our RCRA implementation assistance contractor, the A.T. Kearney Team. The PR is a summary of the known information about production processes, waste generation, waste management, releases, and the environmental setting. Descriptions of your facility's Solid Waste Management Units (SWMUs)

and Areas of Concern (AOCs), which were identified from available file material were also compiled during the PR. The definitions of solid waste management unit (SWMU) and area of concern (AOC) are as follows: A SWMU is defined as any discernable unit where solid wastes have been placed at any time from which hazardous constituents might migrate, regardless of whether the unit was intended for the management of a solid or hazardous waste and AOC is defined as any area where a release to the environment of hazardous wastes constituents has occurred or is suspected to have occurred on a non-routine or nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

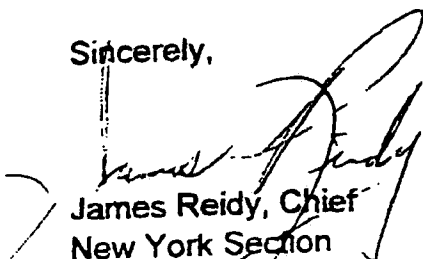
The second step of the RFA process is a Visual Site Inspection (VSI) of your facility to verify the locations of all SWMUs and AOCs, determine their condition by visual observation, and resolve any information gaps identified during the PR. The VSI for your facility is scheduled for August 22, 1996 and will be conducted by our contractor who may be accompanied by USEPA Region 2 and NYSDEC representatives. The contractor will require the assistance of some of your personnel in reviewing current and past solid waste management practices during the inspection. Photographs of each SWMU will be taken to document the condition of units at the facility and the waste management procedures used.

Also enclosed is a copy of the list of SWMUs and AOCs (Attachment I) and a VSI Agenda which includes an attachment listing preliminary information needs for the RFA. To prepare for the VSI, please develop a response to each of the information requests listed in the VSI Agenda in Attachment II. We wish the RFA Report to reflect only accurate information regarding your facility. It is requested that the responses should be presented to the VSI team during the VSI. It is further requested that two copies of a large map identifying the locations of each SWMU identified in the PR Report be provided. Responses should be certified in accordance with 40 CFR Section 270.1(d) by a person who meets the requirements of 40 CFR Section 270.11(a).

In preparation for the VSI, the inspection team personnel will be required to identify any potentially hazardous conditions likely to be encountered at the site during the performance of the VSI and prepare a safety plan that addresses hazards, if necessary. You will be contacted by a member of the Kearney Team to obtain specific information on the levels of personal protection required and the materials handled in each area of your facility.

Should you have any questions regarding the contents of this letter, please contact Mr. Mike Infuma, the EPA Work Assignment Manager, at (212) 637-4177. We at USEPA Region 2 would like to thank you for your assistance in this matter.

Sincerely,



James Reidy, Chief
New York Section
USEPA Region 2

Enclosure

cc: J. Carter, EPA Contracts w/encl.
B. Rogers, NYSDEC Region 7 w/encl.
W. Goold, A.T. Kearney w/encl.
E. Dassatti, DEC, Albany w/encl.

**RCRA FACILITY ASSESSMENT
VISUAL SITE INSPECTION AGENDA**

FACILITY: Carrier Corporation
Carrier Parkway
Syracuse, New York

EPA ID NO.: NYD001317072

FACILITY CONTACT: Ms. Beth Hubben

DATE OF INSPECTION: August 22, 1996

PERSONNEL: Mr. Bill Goold, A.T. Kearney, Inc.
Mr. Rob Stringer, A.T. Kearney, Inc.
USEPA Region 2 and NYSDEC representatives may
also be present

1.0 PURPOSE OF THE VISUAL SITE INSPECTION:

The Hazardous and Solid Waste Amendments of 1984 (HSWA) broadened the scope of EPA's authority under RCRA by requiring corrective action for releases of hazardous waste and hazardous constituents at facilities that manage hazardous wastes. The authority requires corrective action for releases to the environment from any Solid Waste Management Unit (SWMU), including hazardous and non-hazardous wastes.

The first step in the EPA's corrective action process is a RCRA Facility Assessment (RFA) to determine the potential for releases of hazardous constituents from all SWMUs. The RFA includes a preliminary review (PR) of available file information on the facility, a visual site inspection (VSI), and, if necessary, verification sampling. The preliminary review is being completed for the Carrier facility and a VSI has been determined to be necessary.

1. Confirm, by visual inspection, information collected, examined, and assessed during the PR;
2. Survey the site for additional SWMUs and other areas of concern, and identify potential sampling points for sampling activities, if necessary; and

3. Review the site information with the facility representative(s) and collect additional information to address the information needs identified during the PR. Photographs are to be taken of each SWMU and other areas of concern.

2.0 INSPECTION ORGANIZATION:

A two-member team from our contractor, A.T. Kearney, will perform a one day VSI. Additional observers from the USEPA Region 2 and NYSDEC may also attend.

- The team, in general, will inspect the layout of production facilities and waste management and disposal areas, such as container storage areas and treatment units. An interview with the facility staff will be performed to develop a better understanding of past waste disposal practices and to delineate the vertical and horizontal dimensions of all waste generation, treatment, storage, and disposal units.

The overall rationale of this inspection is to enable the team to trace past and present waste streams from process through treatment and disposal. A preliminary list of potential SWMUs has been developed after a review of available file material. Further investigation during the VSI may reveal additional SWMUs, or that some units previously identified are in fact not SWMUs. Some adjustments to the agenda will more than likely be necessary to accommodate facility staff, geographical location of units and/or operational constraints.

A list of SWMUs and AOCs has been included as Attachment I and an information needs list as Attachment II to the VSI Agenda so that Carrier staff can prepare for the site visit. These needs should be resolved, to the extent possible, during the VSI introductory meeting. The agenda may be arranged at that time to ensure that all SWMUs identified will be inspected more efficiently.

3.0 PROPOSED INSPECTION SCHEDULE:

Introductory Meeting: 9:00 a.m., August 22, 1996

The project team will meet with Carrier Corporation representatives to discuss the following issues:

- Purpose of visit;
- Agenda;
- Health and safety considerations;
- Transportation arrangements;
- Information needs; and
- Agenda revisions.

Inspection Tour: 10:00 a.m., August 22, 1996

An inspection of the SWMUs and AOCs listed in Attachment I will be conducted.

Close-out Meeting: 4:00 p.m. August 22, 1996

Project team members will meet with facility personnel to conclude the inspection visit. Outstanding issues and remaining information needs will be discussed.

ATTACHMENT I

LIST OF SOLID WASTE MANAGEMENT UNITS AT
CARRIER CORPORATION
SYRACUSE, NEW YORK

SWMU No.

1. Former 20,000 gallon In-Ground Concrete Storage Tank
2. Former 8,000 gallon Underground Steel Storage Tank
3. Former 8,000 gallon Underground Steel Storage Tank
4. Container Storage Area
5. Satellite Accumulation Area
6. Paint Booth
7. Wastewater Pretreatment Plant

AOCs

- A. Acid Dip Tank
- B. Alkaline Cleaning Tank
- C. Small Parts Degreaser
- D. Freon Tank Spill Area #1
- E. Freon Tank Spill Area #2
- F. Storm Sewer

ATTACHMENT II

PRELIMINARY INFORMATION NEEDS FOR RCRA FACILITY ASSESSMENT

**Carrier Corporation
Syracuse, New York
NYD001317072**

- 1. Identify past or present SWMUs which have not been identified in the VSI Attachment I. Include a brief description of wastes managed in these units, the locations of the units, and the period of operation. Units to identify include, but are not limited to, the following:**
 - Above-ground and underground waste storage/processing tanks.
 - Former storage tanks.
 - Waste storage units for solid and hazardous wastes which fall under the 90-day exemption from RCRA.
 - All waste handling areas and associated activities including loading zones, transfer areas, waste accumulation areas, waste sampling and storage of sampling equipment.
- 2. For each SWMU and AOC, provide unit dimensions and construction details, periods of operation, waste managed, release controls, history of releases, whether the unit is in the 100-year floodplain and a description of inspection and maintenance procedures to assure integrity of the unit.**
- 3. Provide a complete description of current facility operations including all production processes and waste stream generation points.**
- 4. Describe any processes and/or waste disposal changes which have altered the facility profile over the life of the operation (including previous owner operations).**
- 5. Provide facility maps including historical topographic maps, any aerial photographs, and a site map, which identify the locations of all facility operations and the SWMUs and AOCs listed in Attachment I. Also, include the following information:**
 - Location of former closed concrete and steel storage tanks.
 - Location of any valves or piping associated with the storage tanks.

6. Provide Information on all current Federal and State permits granted, both past and current, including any compliance monitoring results.
7. Provide information on all SPDES outfalls, past and present, and/or wastewater discharge permits, including any monitoring results.
8. Provide information detailing all enforcement issues and resulting actions.
9. Provide a map or drawing of all stormwater and industrial sewers, and monitoring wells at the site.
10. Provide detailed information regarding all spills and releases at the facility.
11. Provide information concerning how domestic refuse and sanitary wastes are handled by the facility.
12. Identify sources of drinking water in the area and at the facility. Please provide any available well logs.
13. Provide information regarding climate and meteorological conditions, geographical coordinates, topography, surface water drainage and distance to nearest surface water body.
14. Provide site specific information such as the location of potentially sensitive environmental areas (i.e. wetlands) depth to groundwater, types of soils, and surrounding land use.

Attachment 2

DRAFT
RCRA FACILITY ASSESSMENT REPORT
FOR

CARRIER CORPORATION
SYRACUSE, NY
EPA ID NO. NYD001317072

Submitted to:

U.S. Environmental Protection Agency
Region 2
290 Broadway, 22nd Floor
New York, New York 10007

Submitted by:

A.T. Kearney, Inc.
Kearney/Centaur Division
One Wall Street Court
Third Floor
New York, New York 10005

September 25, 1996

9667

RCRA FACILITY ASSESSMENT REPORT

CARRIER CORPORATION
SYRACUSE, NY
EPA ID NO. NYD001317072

TABLE OF CONTENTS

I.	INTRODUCTION	I-1
II.	SITE DESCRIPTION	II-1
III.	SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN IDENTIFIED DURING THE VISUAL SITE INSPECTION . . .	III-1
IV.	CONCLUSIONS	IV-1
V.	REFERENCES	V-1

FIGURES

FIGURE 3-1	SWMU AND AOC LOCATION MAP	III-2
------------	-------------------------------------	-------

TABLES

TABLE 3-1	LIST OF SWMUS AND AOCS	III-3
-----------	----------------------------------	-------

APPENDICES

APPENDIX A	VISUAL SITE INSPECTION PHOTOGRAPH LOG
APPENDIX B	VISUAL SITE INSPECTION FIELD NOTEBOOKS

I. INTRODUCTION

The 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA) authorize EPA to require corrective action for releases of hazardous waste or hazardous constituents from Solid Waste Management Units (SWMUs) and other Areas of Concern (AOCs) at all operating, closed, or closing RCRA facilities. The intent of this authority is to address previously unregulated releases to air, surface water, soil, groundwater, and from the generation of subsurface gas.

Follow-up on facilities, such as the Carrier Corporation Thompson Road facility in Syracuse, New York that are no longer seeking a permit and which do not appear to have any significant releases of contamination based on the information currently available, has not been a high priority in the past. However, EPA has decided to make a final determination regarding the potential for contamination at the facility. Therefore, EPA has tasked A.T. Kearney with conducting a Preliminary RCRA Facility Assessment (RFA) to evaluate the potential for contamination and to support the ranking of this facility using the National Corrective Action Prioritization System (NCAPS).

This report summarizes the results of the Visual Site Inspection (VSI) conducted by A.T. Kearney, Inc. at the Carrier Corporation Thompson Road facility located in Syracuse, New York, EPA ID No. NYD001317072. Seventeen SWMUs and two AOCs were identified during the file review and VSI. The units are listed in Table 3-1 and their locations are shown in Figure 3-1. Sources of information used in the draft preliminary RFA Report include RCRA, air, and water files from the New York State Department of Environmental Conservation (NYSDEC) office in Syracuse and information provided by the facility during and after the VSI.

This report is organized into five chapters. Chapter two provides a general facility description including the facility's environmental setting; operations and process description; wastes and waste management practices; the facility's regulatory history; and the history of spills at the facility. Chapter three provides a description of each SWMU and AOC. Chapter four summarizes the results of the RFA and presents conclusions. Chapter five lists the references used in preparing this report. In addition, there are two appendices which contain the VSI photograph log (Appendix A) and a copy of the VSI logbook (Appendix B).

II. SITE DESCRIPTION

The Carrier Corporation is located adjacent to Carrier Parkway and Thompson Road in a mixed-use industrial/commercial area of Syracuse, Onondaga County, New York. The facility has been in operation at this location since the early 1950's. Prior to the purchase of the facility by Carrier, the existing facility was owned and operated by the General Electric Corporation, which was built in 1942 for defense purposes. Prior to that date, the property was utilized as farmland. Currently, the Carrier facility occupies approximately 187 acres and employs about 4,500 people (Reference 7).

Environmental Setting

The Carrier Thompson Road facility is bordered to the north by the Carrier Parkway traffic circle, to the east by Thompson Road and to the west by Kinne Street. The surrounding land is primarily occupied by light industrial and service businesses. Carrier's property is surrounded by a six foot chain link fence with three tiered barb wire. The facility is also equipped with security alarms. The distance to the nearest resident or residential area is unknown. The topography within the boundaries of the facility is relatively flat with a general slope from the south downwards to the north-northeast. The majority of Carrier's property is developed and covered by impervious material (i.e., concrete and asphalt). Surface water drainage appears to flow to the north and eventually reaches Sanders Creek, a small creek that runs along the north side of the facility. From here, Sanders Creek flows into Lay Creek and Lay Creek ultimately flows to Onondaga Lake. Groundwater levels in the immediate area are shallow and flow downgradient to the north-northeast, generally following the surface topography. There are no known uses of groundwater in the area. The facility receives their water from the city of Syracuse which relies on local surface water sources (Reference 7).

Operations and Process Description

The Carrier facility is a manufacturer of a variety of air conditioning and chiller units. The facility's operations consist of the machining, cleaning, assembly, and painting of units ranging from individual room air conditioners to large commercial and industrial refrigeration units. Metal parts and pipes are cleaned by dipping into a sulfuric acid tank to remove grit and oils. Then, the metal is dipped into an alkaline cleaner tank, rinsed, and then dipped into an alkaline rust inhibitor solution. The metal is then used for fabrication purposes and is then painted (Reference 7).

During the VSI, four primary areas of manufacturing were identified; buildings TR-1, TR-2, TR-3 and TR-20. Building TR-1

manufactures centrifugal refrigeration equipment including assembly along with limited cleaning and painting operations. Building TR-2 is the center for parts distribution and is where replacement copper and aluminum coils are manufactured. In the TR-3 building, compressors are manufactured. This building houses a large machining operation and two painting areas. Building TR-20 is where large container refrigeration units, such as those used for ship cargo containers, are manufactured. This building is primarily utilized for the fabrication of these units but is also a site for cleaning, painting and testing operations. The remainder of the facility consists of administrative and support operations which do not involve the management of hazardous waste (Reference 7).

Waste Management Practices

Carrier is considered a large quantity generator of hazardous waste, generating greater than 1000 kg/month. Hazardous waste is generated onsite during metal cleaning and painting operations. Hazardous wastes generated onsite consist primarily of spent sulfuric acid, acid and alkaline sludges, solvent based paints and paint booth sludge and filter cake from the wastewater pretreatment plant, and waste oil (References 6 and 7).

Hazardous waste generated during cleaning operations originate from the Acid/Alkaline Cleaning Units (SWMU 13) and from Acid/Alkaline Tanks 1,2,3 and 4 (SWMU 10). Metal parts and pipes are cleaned in these units and the cleaning solution is held in these units until they have become sufficiently dirty so as not to be effective. Currently the spent solutions are sent to either TR-3 or TR-20 Wastewater Pretreatment Systems (SWMUs 15 and 16) depending on where the solution was generated. Following treatment, filtered cleaning solutions are reused while effluent is discharged to the local POTW. Waste cleaning fluid generated in Building TR-1 may also be transferred to the Bulk Tank Area (SWMU 9) for temporary storage before being transferred to SWMU 15. Prior to these units being installed, waste cleaning solutions were transferred to either the Former 20,000 Gallon Concrete Storage Tank #1 (SWMU 1) or to the Former 8,000 Gallon Concrete Storage Tank #1 (SWMU 5) where they were held prior to shipment offsite for disposal (Reference 7).

The facility uses non-hazardous coolant fluid as part of the production process. When the coolant becomes contaminated, it is currently transferred to either TR-3 or TR-20 Wastewater Pretreatment Systems (SWMUs 15 and 16) depending on where the solution was generated. Solids generated during treatment are dewatered and the filter cake is transferred to the Less-Than-90-Day Storage Area (SWMU 9) for disposal offsite. The effluent is discharged to the local POTW. Waste coolant fluid may also be temporarily stored in the Bulk Tank Area (SWMU 9) or in one of the Interim Storage Tanks (SWMU 17) if there is not available

capacity in the treatment system. Previously, the coolant was transferred to either the Former 20,000 Gallon Concrete Storage Tank #2 (SWMU 2) or to the Former 8,000 Gallon Concrete Storage Tank #2 (SWMU 6) where it was held prior to shipment offsite for disposal (Reference 7).

A number of activities, including machining and power generation, generate waste oil. Currently waste oil is collected and stored in a tank in the Bulk Tank Area (SWMU 9) or the Interim Storage Tanks (SWMU 17) prior to being shipped offsite for recycling. Previously, waste oil was stored in the Former 8,000 Gallon Steel Storage Tank #1 (SWMU 3). Before 1980, waste oil generated from the boilers was stored in the Former Waste Oil Storage Tank Area (SWMU 7) prior to being reused as fuel onsite (Reference 7).

The other wastes generated at this facility are associated with painting operations. The facility currently operates a number of wet Paint Booths (SWMU 14). Water is contained in these paint booths and periodically must be removed when it becomes too dirty. This water is then transferred to the TR-3 Wastewater Pretreatment System (SWMU 15) for treatment and discharge to the POTW. Other wastes associated with painting (thinners, unused residues) are stored in Satellite Accumulation Areas (SWMU 12) until they are transferred to the facility's main hazardous waste storage area, the Less-Than-90-Day Container Storage Area (SWMU 8) (Reference 7).

Historically, solvents, some containing TCE, were used for various cleaning applications. Prior to 1985, these solvents were stored in the Former 8,000 Gallon Steel Storage Tank #2 (SWMU 4) prior to being shipped offsite for disposal. After 1985, these solvents were drummed and transferred to the Less-Than-90-Day Container Storage Area (SWMU 8) for storage prior to disposal offsite. Facility representatives indicated that solvents containing TCE were no longer used at the facility (Reference 7).

Regulatory History

Carrier applied for a Part B Permit for its Thompson Road facility in 1982. This application was subsequently withdrawn in 1983 and the facility was classified as a large quantity generator. As part of the withdrawal, the facility was required to close its existing storage tanks (SWMUs 1-4). The four tanks were closed under a state-approved closure plan. Contaminated soils were detected during closure. All visibly contaminated soils were removed. However, to monitor if any additional contamination was present, the facility agreed to install five monitoring wells throughout the facility. These wells, which are sampled quarterly, have shown intermittent elevated levels of TCE (References 1 and 7).

The facility has been inspected annually by NYSDEC under RCRA since 1981. No violations have been noted other than administrative ones such as improper labelling and record keeping problems.

NYSDEC notified EPA in 1989 that, because closure activities had been completed and the facility was not pursuing a NYSDEC Part 373 permit, NYSDEC had no authority to mandate corrective measures. Based on this, authority for corrective measures can only be addressed under an EPA 3008 (h) order. (Reference 3)

The facility has several other types of environmental permits. They have a SPDES permit to discharge to Sanders Creek in two locations. The facility violated its effluent limitations and effluent requirements in 1989 and 1990, resulting in the facility entering into a consent agreement with the state to upgrade the Storm Sewer System (AOC B) as well as to treat storm water prior to discharge. The facility also has a permit with the local sewerage authority to discharge treated wastewaters to their POTW. Finally, the facility has a number of local air permits, mainly associated with its painting operations. With exceptions described below under History of Releases, there have been no known violations of these permits (References 5 and 7).

History of Releases

Review of the NYSDEC files revealed information on two airborne releases at the facility. Both of these involved the release of freon gas into the atmosphere. These releases occurred in 1992 and 1993, were promptly reported, and were promptly repaired. In response to these spills, the facility reviewed the incident, determined the causes, and took remedial action to prevent future releases. No releases have been reported since 1993 (Reference 4).

Releases have also occurred to Sanders Creek through the SPDES permitted outfalls. Facility representatives indicated that in 1988 approximately 25,000 gallons of sodium hydroxide overflowed from a tank and entered the Storm Sewer System (AOC 2). Since the effluent was untreated at that time, the sodium hydroxide was discharged directly through the Wastewater Discharge Point to Sanders Creek (AOC 1). No cleanup or sampling was reportedly conducted in response to the spill. In addition, the facility violated its SPDES effluent limits in 1989 and 1990. As a result, the facility connected the Storm Sewer System to and upgraded the TR-3 Wastewater Pretreatment System (SWMU 15) to treat storm water prior to discharge (References 5 and 7).

III. SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

This section presents descriptions of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified at the Carrier facility. The SWMUs and AOCs are listed in Table 3-1 and described below. The locations of the SWMUs and AOCs are shown in Figure 3-1.

It was determined early during the VSI that the units located inside did not present more than a minimal risk to the environment. As a result, the VSI focussed on outdoor units. In addition, where there were many of a similar type of unit located indoors (e.g., Satellite Accumulation Areas (SWMU 12)), only a representative sample of these units were inspected during the VSI. The VSI Photographic Log is provided in Appendix A.

SWMUs 1 and 2 - Former 20,000-Gallon Concrete Storage Tanks #1 and #2 Photo No. 1-1

These units were unlined concrete tanks used to hold waste alkaline cleaning solutions (Tank #1) and waste coolant solutions (Tank #2). The tanks, which each had a capacity of 20,000 gallons, were approximately 15 feet wide by 30 feet long by 8 feet deep. The tops of the tank were at-grade and were open. The two tanks shared a common wall and were located north of building TR-6 in the east-central portion of the facility. Although it is not known precisely when the tanks were installed, it was assumed by facility representatives that they were installed concurrently with Carrier taking over the facility in the early 1950s. The tanks were removed in 1987. Tank #1 managed hazardous waste alkaline cleaning solutions and Tank #2 managed non-hazardous waste coolant generated throughout the facility. The solutions were transferred from various manufacturing areas in a small pumper truck to the tanks where the wastes were stored until being shipped offsite for treatment. The tanks have been replaced by the TR-3 and TR-20 Wastewater Pretreatment Systems (SWMUs 15 and 16).

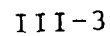
The tanks were removed under an NYSDEC approved closure plan in 1987. Sampling conducted on residual and excavated soils were determined to be non-hazardous. However, the veracity of the samples was somewhat compromised because of groundwater that infiltrated the excavation on at least two occasions during the removal. As a result, NYSDEC mandated that five shallow monitoring wells be installed to determine if releases had occurred. Groundwater monitoring results have indicated that there are low levels of TCE present in groundwater under the facility. Facility representatives indicated that the source of this contamination is most likely Tank #1 (SWMU 1). (References 2 and 7).

Table 3-1

SWMUs and AOCs Identified at the Carrier Corporation Thompson Road Facility

<u>SWMU Number</u>	<u>SWMU Name</u>
1.	Former 20,000-Gallon Concrete Storage Tank #1
2.	Former 20,000-Gallon Concrete Storage Tank #2
3.	Former 8,000-Gallon Steel Storage Tank #1
4.	Former 8,000-Gallon Steel Storage Tank #2
5.	Former 8,000-Gallon Concrete Storage Tank #1
6.	Former 8,000-Gallon Concrete Storage Tank #2
7.	Former Waste Oil Storage Tank Area
8.	Less-Than-90-Day Container Storage Area
9.	Bulk Tank Area
10.	Acid/Alkaline Tanks 1,2,3 and 4
11.	Scrap Metal Storage Area
12.	Satellite Accumulation Areas
13.	Acid/Alkaline Cleaning Units
14.	Paint Booths
15.	TR-3 Wastewater Pretreatment System
16.	TR-20 Wastewater Pretreatment System
17.	Interim Storage Tanks
<u>AOC</u>	<u>AOC Name</u>
A.	Wastewater Discharge Point to Sanders Creek
B.	Storm Sewer System

Carrier Corporation



Based on the groundwater monitoring results, it appears likely that the tanks released to the environment in the past. Since the source has been removed, there is no potential for current releases from the units.

SWMUs 3 and 4 - Former 8,000-Gallon Steel Storage Tanks #1 and #2

Photo No. 1-1

This unit consists of two steel underground storage tanks. The tanks, which were located immediately south of SWMUs 1 and 2, were installed in 1979 and removed in 1987 concurrently with the closure of SWMUs 1 and 2. The tanks managed waste oils (SWMU 3) and waste solvents containing TCE (SWMU 4) collected from locations throughout the plant. The wastes were transported from manufacturing areas to the tanks in a small pumper truck and were stored there until being removed offsite for recycling or disposal, or, in the case of waste oil, transferred to the boilers for heating. The waste oil tank (SWMU 3) was replaced by one of the Interim Storage Tanks (SWMU 17) and one of the tanks in the Bulk Tank Area (SWMU 9). Hazardous solvents are reportedly no longer used at the facility. Any hazardous solvents generated after the closure of SWMU 4 was placed in a container and stored in the Less-Than 90 Day Storage Area (SWMU 9) prior to disposal offsite.

The tanks were installed in gravel surrounded by the native soil. During excavation, the gravel was observed to smell like petroleum and the top one to two feet of soil was discolored. The gravel and all discolored soil was disposed of as hazardous waste. The residual soil was sampled as part of the closure activities and determined to be below cleanup levels. The monitoring wells installed as part of the closure were positioned so that releases from these units would also be detected.
(References 2 and 7)

Based on the observations during removal, it appears that the underground tanks released to the surrounding soil. However, NYSDEC certified that all residual contamination was removed during closure. Therefore, based on this certification, in addition to the fact that the units are no longer present, these units have a minimal potential to release.

SWMUs 5 and 6 - Former 8,000-Gallon Concrete Storage Tanks #1 and #2

Photo No. 1-21

These units were two unlined concrete tanks that managed waste acid/alkali cleaning solutions and waste coolants generated in building TR-1. The units functioned similarly to SWMUs 1 and 2, except that only wastes from building TR-1 were managed in them. The units were located outdoors, adjacent to the east side of

building TR-1. As with SWMUs 1 and 2, the tops of the tanks were open and at-grade. Wastes were transported either in drums, through hoses, or by a small pumper truck to the units where they were stored until being removed offsite. As with SWMUs 1 and 2, the date when these units were installed is unknown but assumed to be in the early 1950s when Carrier took ownership of the facility. The tanks were removed in 1979 and their function assumed by SWMUs 1 and 2. The area where the tanks were located was reportedly backfilled with clean soil and paved over. According to facility representatives, no confirmatory sampling was conducted in association with the removal (Reference 1).

Because the units were unlined in-ground concrete tanks, one of which (SWMU 5) managed potentially corrosive hazardous waste, and no confirmatory sampling was conducted, these units had a moderate potential to release.

SWMU 7 - Former Waste Oil Tank Area

Photo No. 1-25

This unit consisted of an above-ground, steel, 500 gallon waste oil tank. The tank was located adjacent to the south side of building TR-8 and was situated on top of a concrete saddle within a concrete bermed area. Facility representatives did not know when the tank was installed and reported that it was removed in the late 1970s. The unit managed waste oil generated by the power house from boiler operations. Any oil determined not to be suitable for burning was shipped offsite for recycling or disposal. This unit was replaced when the Former 8,000 Gallon Underground Storage Tank (SWMU 3) was installed (Reference 7).

During the VSI, the location of the former unit was observed to be somewhat overgrown but exhibited no evidence of a release. The concrete saddle and bermed area were intact. Therefore, the past and present potential for release from this unit is minimal.

SWMU 8 - Less-Than-90-Day Container Storage Area

Photo No. 2-1

This unit is the currently permitted hazardous waste container storage area at the facility. It consists of a one-story building (TR-23) that houses all containerized hazardous and non-hazardous waste, as well as non-hazardous filter cake generated from the treatment of coolant liquid. The waste storage area is approximately 20 feet by 40 feet and consists of an indoor coated concrete floor surrounded by a four inch high berm. The loading area is also concrete and is sloped down to capture any spills. The facility does not manage any incompatible wastes. Therefore, there is no need to segregate them into different areas. The building was constructed in 1979 and is currently operating.

Previous to the construction of this building, containers were reportedly stored outdoors on asphalt or concrete at this same location. Facility representatives reported that there have been no spills that have been released from containment in the present structure. They did not know of any releases that may have occurred prior to 1979 (Reference 7).

During the VSI this unit appeared to be well managed and no signs of spills or cracking in the concrete were observed. In general, NYSDEC has approved of the operations of this unit in its annual inspections. As a result, this unit poses minimal potential to release.

SWMU 9 - Bulk Tank Area

Photo No. 1-22

This unit consists of three upright, cylindrical steel tanks located indoors in the south side of building TR-1. These tanks are used to store waste oil, waste coolant, and waste acid/alkali cleaner generated throughout building TR-1. The tanks, which are all 750 gallon tanks, are located above a coated concrete floor within secondary containment with a capacity of 110% of any of the tanks. Materials are transferred to the units in drums or other smaller containers. Waste oil is removed approximately quarterly by an outside vendor for recycling. Waste coolant and cleaner is removed approximately monthly using a small pumper truck and transferred to the TR-3 Wastewater Pretreatment System. This unit has been in place since 1988 and is currently operating. Prior to 1988, these wastes were managed in either the Former 20,000 Gallon Concrete Storage Tanks #1 and #2 (SWMU 1 and 2), the Former 8,000 Gallon Steel Storage Tank #1 (SWMU 3), or the Former 8,000 Gallon Concrete Storage Tank #1 and #2 (SWMUs 5 and 6), depending on the time it was generated and the available capacities of the units (Reference 7).

During the VSI the tanks and secondary containment appeared to be intact, with no signs of spillage observed around the tanks. As a result, this unit poses minimal potential to release.

SWMU 10 - Acid/Alkaline Tanks #1, #2, #3, #4 Photo Nos. 1-19, 1-20

This unit consists of four 6,000 gallon rectangular steel tanks located indoors in the northeast portion of building TR-1. The tanks, which are located within secondary containment above a coated concrete floor, are used to clean large metal parts with acid or alkali cleaning solutions. After a period of time, the cleaning solutions become too dirty to be effective. At this point, the contents of the tank are transferred to a small pumper truck and transferred to the TR-3 Wastewater Pretreatment System (SWMU 15). Facility representatives did not know when the units were installed, although it is likely that they, or their

predecessors were installed when Carrier took over the facility in the early 1950s. They are currently active. Prior to the installation of SWMU 15, the contents of these tanks were discharged to the Former 8,000 Gallon Concrete Storage Tank #1 (SWMU 5) (Reference 7).

During the VSI, the tanks and secondary containment were observed to be intact and no stains or other sign of release were observed. The potential for this unit to release is minimal.

SWMU 11 - Scrap Metal Storage Area

Photo No. 1-16

This unit is an open, outdoor paved area located in the center of the facility, adjacent to the west side of building TR-5. The unit is used to store miscellaneous scrap metal generated throughout the facility prior to shipment offsite for recycling. Facility representatives were not aware when this unit became active but suspected that it started about the time Carrier took over the facility in the early 1950s. Reportedly only metal scrap was stored here (Reference 7).

This unit has been included as a SWMU because it was open and outdoors and the possibility existed that exposed metals could rust and decompose and runoff could carry metals into the soil and groundwater. During the VSI, the pavement was found to be cracked in some places. However, no stains or other indication of runoff from wastes stored here were observed during the VSI. Therefore, the potential for this unit to release is minimal.

SWMU 12 - Satellite Accumulation Areas

Photo Nos. 1-13, 1-15

The facility has several (greater than 20) short-term or "point of generation" (POG) storage areas located throughout the manufacturing areas in buildings TR-1, TR-2, TR-3, TR-19, and TR-20. All of these areas are located indoors, on concrete. In general, they consist of 55 gallon drums labelled for waste storage, although in some cases smaller containers are used. Wastes including waste oil, paint wastes, waste cleaners, and waste solvents are stored in these until the container approaches being full. At this time, in most cases, they are transported by the facility's environmental department to the Less-Than-90-Day Container Storage Area (SWMU 8) for storage until shipment offsite for disposal. In the case of waste oil and waste cleaners, these may also be transported to and discharged to a tank in either the Bulk Tank Area (SWMU 9) or the Interim Storage Tanks (SWMU 17). According to facility representatives, these units have existed as long as there has been manufacturing taking place at the facility and they are still active. The locations of the units have changed as manufacturing has been realigned over the years (Reference 7).

During the VSI, because all of these units are indoors and on concrete, only a representative sample of the containers was observed. All areas observed were intact, with no staining observed, and all appropriate labels in place. Because of the location and the condition of the containers, the potential for release from this unit is minimal.

SWMU 13 - Acid/Alkaline Cleaning Units

Photo No. 1-14

These units are rectangular open-topped steel tanks used to clean small metal parts. There are several of these tanks which are used in series. The tanks, which are currently active and reportedly have been in place in one form or another since Carrier took over the facility, are located inside Building TR-20. The tanks are located inside, over concrete, within secondary containment. After a period of time, the cleaning solutions become too contaminated to be used. At this point, the solution is transferred via overhead piping to the TR-20 Wastewater Pretreatment System (SWMU 17) for treatment. Prior to the installation of SWMU 17, these wastes were transferred to the Former 20,000-Gallon Concrete Storage Tank #1 (SWMU 1) (Reference 7).

During the VSI, these tanks were observed to be intact with no staining observed. Based on the above, the potential for this unit to release is minimal.

SWMU 14 - Paint Booths

Photo No. 1-12

Carrier employs several types of paint booths as part of the manufacturing operations at the facility. All of the paint booths employ filtration systems to ensure that hazardous paint vapors are not released to the atmosphere. In addition, some of them are wet paint booths where water is used to help apply the paint to a metal surface. This water is continuously filtered until the efficiency of the filters drops low enough where they require replacement or the water becomes too dirty to be effectively filtered. When either of these occur, the filters and contaminated water are transferred to the Less-Than-90-Day Storage Area (SWMU 8) where they are held until they are shipped offsite for disposal. All of the paint booths are located indoors, over concrete and water that can no longer be used is transferred to the TR-3 Wastewater Pretreatment System (SWMU 15). The paint booths have been in existence, in various forms and locations, since Carrier took over the facility and are currently active (Reference 7).

During the VSI, the paint booths and filtration systems appeared to be intact and in good working order. Based on the above, the potential for this unit to release is minimal.

SWMU 15 - TR-3 Wastewater Pretreatment System

Photo Nos. 1-3, 1-4, 1-5, 1-6, 1-7

This unit, which was installed in 1990, is the principal treatment system used by the facility for treating acid/alkali cleaning wastes, waste coolants, and stormwater. It is located indoors in the northeast corner of Building TR-3. It consists of several vertically oriented cylindrical steel tanks located indoors over coated concrete within secondary containment. The tanks serve various purposes such as neutralization, treatment, and short term storage. The system receives waste coolant and cleaning fluids from throughout the facility by small tanker truck. The fluids are treated and the effluent from the treatment process is discharged to a POTW and the filtrate is transferred to a process tank where it is held for reuse. The system is also used to treat water collected from the Storm Sewer System (AOC 2). Periodically the tanks must be cleaned. Sludge and other residue removed from the tanks are containerized and transferred to the Less-Than-90-Day Container Storage Area (SWMU 8) for storage until shipment offsite for disposal. Prior to the installation of this system, These wastes were transferred to the Former 20,000 Gallon Concrete Storage Tanks #1 and #2 (SWMU 1 and 2) (Reference 7).

During the VSI, the system and secondary containment appeared to be intact and well maintained. Because of the condition of the unit and its indoor location, this unit's potential to release is minimal.

SWMU 16 - TR-20 Wastewater Pretreatment System

Photo Nos. 1-9, 1-10, 1-11

This unit, which was installed sometime in the mid-1980s, treats waste acid/alkali cleaning and coolant solutions generated in Buildings TR-19 and TR-20. The unit is located indoors in the northern portion of Building TR-20. It performs the same function as SWMU 15 performs for the rest of the facility. The unit consists of steel tanks of various configurations and a filter press located indoors, within secondary containment, over a concrete floor. As with SWMU 15, the tanks serve various purposes such as neutralization, treatment, and short term storage. In addition, because of the need to remove metals from waste cleaning solutions, the system has a flocculation tank and a filter press to remove liquids from settled sludge. Effluent from the treatment process (both from the chemical and physical treatment processes) are discharged to the municipal POTW, filtrate from the chemical treatment process is reused, and filter cake and any sludge or residuals removed from the tank are removed to the Less-Than-90-Day Container Storage Area (SWMU 8) for storage until shipment offsite for disposal. Prior to the

installation of this system, These wastes were transferred to the Former 20,000 Gallon Concrete Storage Tanks #1 and #2 (SWMU 1 and 2) (Reference 7).

During the VSI, the system and secondary containment appeared to be intact and well maintained. Because of the condition of the unit and its indoor location, this unit's potential to release is minimal.

SWMU 17 - Interim Storage Tanks

Photo No. 1-8

The facility installed this unit, consisting of two steel upright cylindrical tanks, in 1994 to provide additional short-term storage capacity for waste coolant and waste oil. The tanks are located indoors, in the northeast corner of Building TR-3 adjacent to SWMU 15, over coated concrete, within secondary containment. Wastes are transported to this unit from various manufacturing sources in the facility by a small pumper truck and temporarily stored here. Waste oil is held here until a sufficient supply accumulates at which time an outside vendor removes the oil for recycling. The waste coolant tank provides extra capacity for those times when the TR-3 Wastewater Pretreatment System (SWMU 15) is operating at full capacity. Before these units existed, waste oil was transferred to the Bulk Tank Area (SWMU 9), the Former 8,000-Gallon Concrete Storage Tank #1 (SWMU 3), or the Former Waste Oil Storage Tank Area (SWMU 7) depending on when and where it was generated (Reference 7).

During the VSI, the system and secondary containment appeared to be intact and well maintained. Because of the condition of the unit and its indoor location, this unit's potential to release is minimal.

AOC A - Wastewater Discharge Point to Sanders Creek

No Photo

The facility discharges stormwater collected in the Storm Sewer System (AOC B) at two points to Sanders Creek which runs north of the facility. These discharges are now SPDES permitted and all water discharged through these outfalls is first treated at the TR-3 Wastewater Pretreatment System (SWMU 15). However, previous to the installation of SWMU 15, discharges were untreated. In 1988, approximately 25,000 gallons of sodium hydroxide was spilled in one of the manufacturing areas and entered into the Storm Sewer System and was discharged to Sanders Creek. The spill was reported to NYSDEC, but no sampling or cleanup activities were undertaken. In addition, prior to the installation of SWMU 15, untreated effluent from the Storm Sewer System was discharged to Sanders Creek. The facility and the state entered into a consent agreement to treat storm water after intermittent TCE contamination was detected in the storm water.

Therefore, it must be assumed that untreated stormwater was discharged to the creek before the treatment system was installed (References 5 and 7).

Because of the difficulty in gaining access to the discharge points, they were not observed during the VSI. Although it is likely that most of the contaminants discharged to the creek flowed downstream, it is possible that some contamination was retained in the sediments in the creek. Therefore, the potential for this unit to release is moderate.

AOC B - Storm Sewer System

No Photo

Storm water that falls on the facility is captured in catch basins located throughout the facility and transferred via underground piping to one of two outfalls on Sanders Creek (AOC B). Facility representatives were not sure of how the piping was constructed but believed that the system has been in place since the facility was first constructed. Sampling of the stormwater has revealed intermittent TCE contamination. Facility representatives indicated that they believed that the source of the TCE was contaminated groundwater which originated from SWMUS 1-4 and is infiltrating the system. Currently, all storm water, with the exception of some during very large storm events, is treated prior to being discharged. However, prior to 1990, the storm water was not treated prior to discharge (Reference 7).

Because this unit is located underground, no photographs were taken of the unit. Because ground water has been found to be infiltrating the system, it is likely that the system discharges during drier times when the groundwater level falls below the elevation of the system. Therefore, the potential for this unit to release is high.

IV. CONCLUSIONS

The Carrier Corporation Thompson Road facility has been operating at this location since the early 1950s. A total of seventeen SWMUs and two AOCs were identified through review of the file material and information collected during and after the VSI.

During the VSI the facility was observed to be generally clean and well-operated from an environmental perspective. The facility has incurred few violations of its various environmental permits and has seemed to respond promptly and responsibly on those instances where violations or releases have occurred.

Most of the units identified at the facility are located indoors over concrete. There is minimal potential for release from these units and they require no further action. Only those units where there is more than a minimal potential for release will be discussed further.

SWMUs 1-4, the Former 20,000-Gallon Concrete Storage Tanks and Former 8,000-Gallon Steel Storage Tanks appear to have released to the environment. However, these units were formally closed under the supervision and approval of NYSDEC and five monitoring wells were installed for post-closure monitoring. Although some contamination has been detected in these wells, since all contamination was removed at closure, there is no further action suggested for these units.

No confirmatory sampling was conducted after the removal of the Former 8,000-Gallon Concrete Storage Tanks #1 and #2 (SWMUs 5 and 6). Since these tanks managed similar materials as SWMUs 1 and 2, which are known to have released, the potential for contaminants to remain following removal is moderate to high. Therefore, it is suggested that the facility collect soil samples at the location of these former units to determine if a release has occurred.

Releases have been documented from the Storm Sewer System (AOC B) and through the Wastewater Discharges to Sanders Creek (AOC A). In the case of the Storm Sewer System, given the presence of monitoring wells at the facility, combined with the fact that all water discharged from the system is treated, it is suggested that no further action be taken with respect to this unit. However, if significant increases in TCE concentration are observed in groundwater, it may be prudent for the facility to conduct integrity testing of the system and make repairs to those areas where the integrity has been breached. With respect to the discharges to the creek, it is suggested that sediment samples be collected at the discharge points and analyzed for pH and TCE.

V. REFERENCES

1. Chudyk, Nicholas P., Carrier Corporation; Letter Regarding Violations and Withdrawal of Part B Application to Ernest Rogru, EPA Region 2; June 17, 1983
2. O'Brien & Gere; Closure Certification for Carrier Corporation Tanks; April 18, 1988
3. Counterman, Paul R.; NYSDEC; Letter to George Meyer, EPA Region 2, Regarding Regulatory Status of Carrier Corporation; May 19, 1989
4. Bianchi, Richard, Carrier Corporation; Notification of Freon Release to NYSDEC; September 21, 1992
5. Lacey, Jeff, NYSDEC; Memorandum on Carrier Corporation Compliance Check to Norm Nosenchuck, NYSDEC; January 26, 1993
6. Carrier Corporation; Hazardous Waste Reduction Plan Annual Status Report; June 21, 1996
7. Visual Site Inspection (VSI) Logbook, by Robert Stringer, A.T. Kearney, Inc.; VSI for Carrier Corporation Thompson Road Facility; August 22, 1996



Photo No. 1-1: View, facing northeast, showing the location of former concrete and steel storage tanks, (SWMUs 1,2,3 & 4) located north of building TR-6.



Photo No. 1-2: View, facing south, of groundwater monitoring wells in former concrete and steel storage tanks area located north of building TR-6.

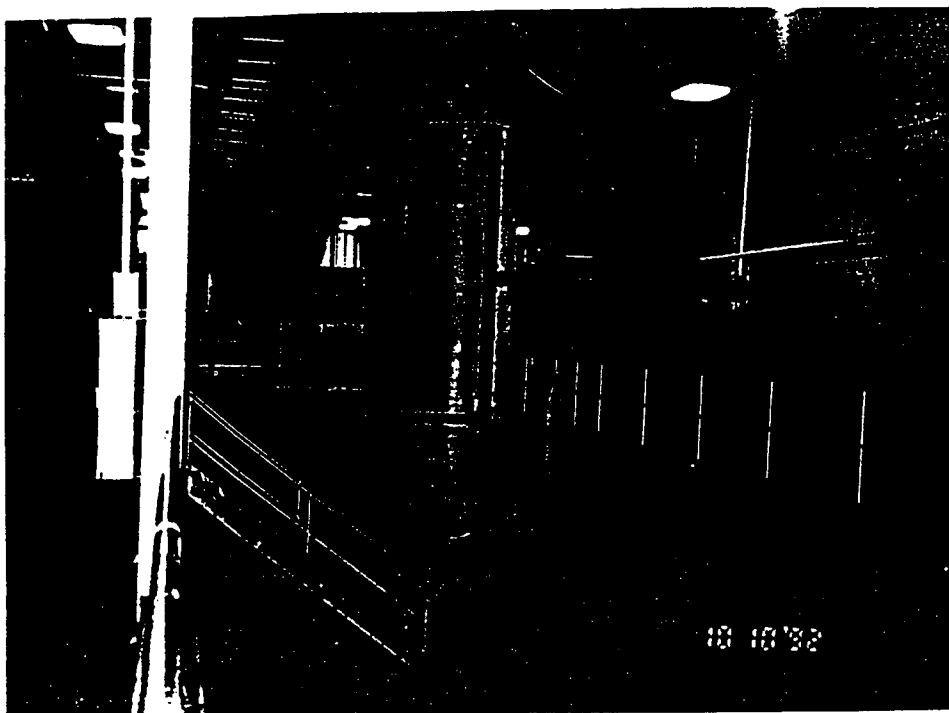


Photo No. 1-3: View, facing northwest, of two SPDES Treatment Tanks and Air Stripping Units (SWMU 15) located in building TR-3.



Photo No. 1-4: View, facing north, of Wet Wells (SWMU 15) located in building TR-3. Wells were installed in 1990.

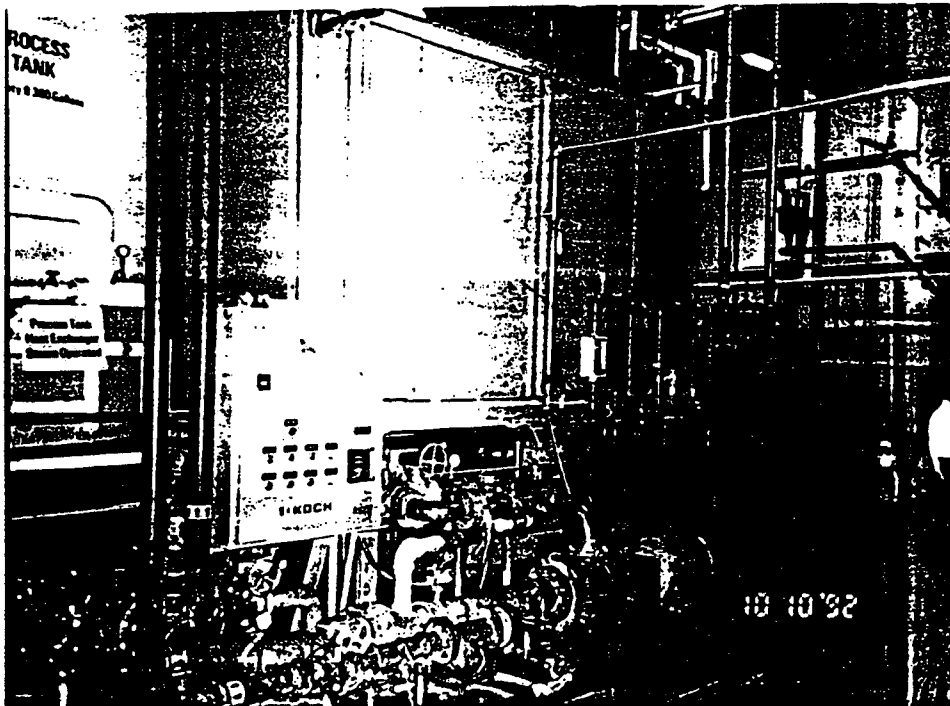


Photo No. 1-5: View, facing west, of the Ultrafiltration Unit (SWMU 15) located in building TR-3. The unit is used to filter cooling fluid.



Photo No. 1-6: View, facing north, of Equalization Tank, Process Tank and Overflow Tank (SWMU 15) located in building TR-3.

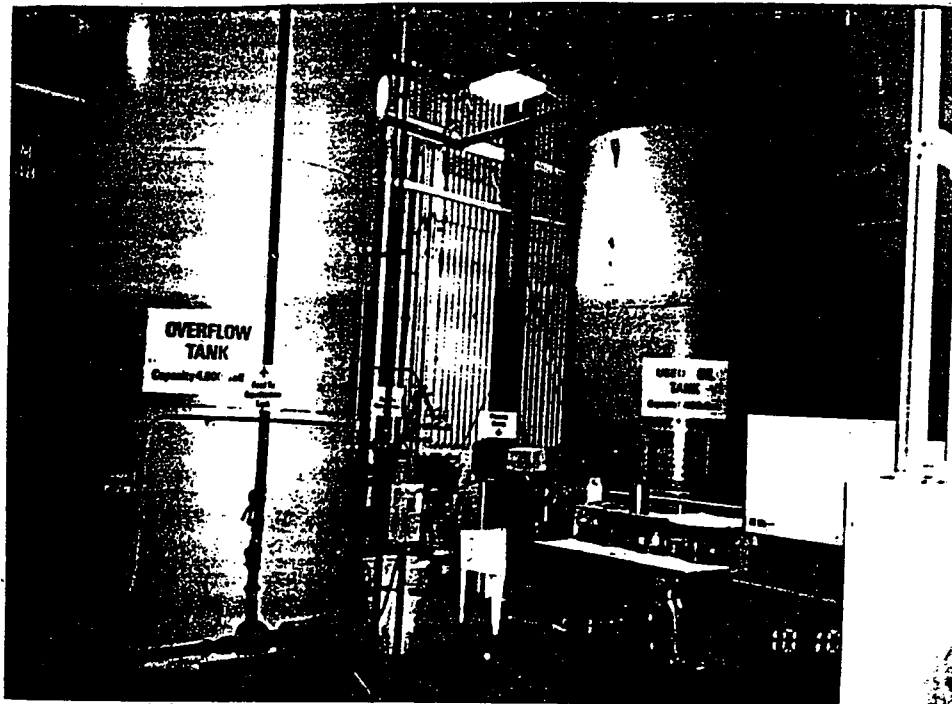


Photo No. 1-7: View, facing northwest, of Overflow Tank and Used Oil Tank (SWMU 15) located in building TR-3.

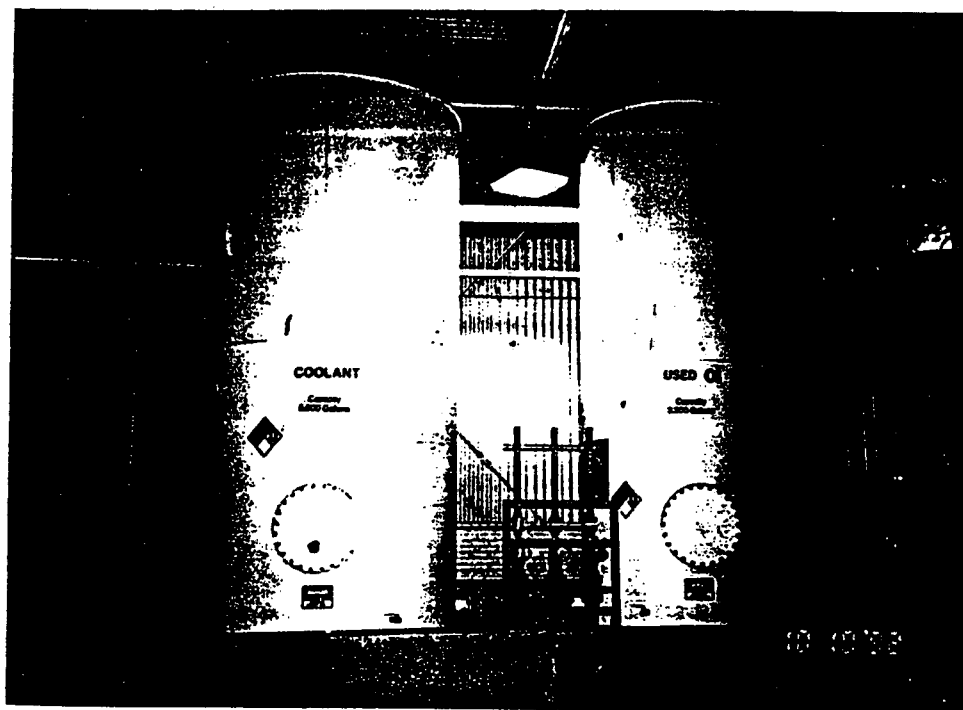


Photo No. 1-8: View, facing southwest of two Interim Storage Tanks (SWMU 17) located in building TR-3. These tanks are used for the collection of used oil and coolant.

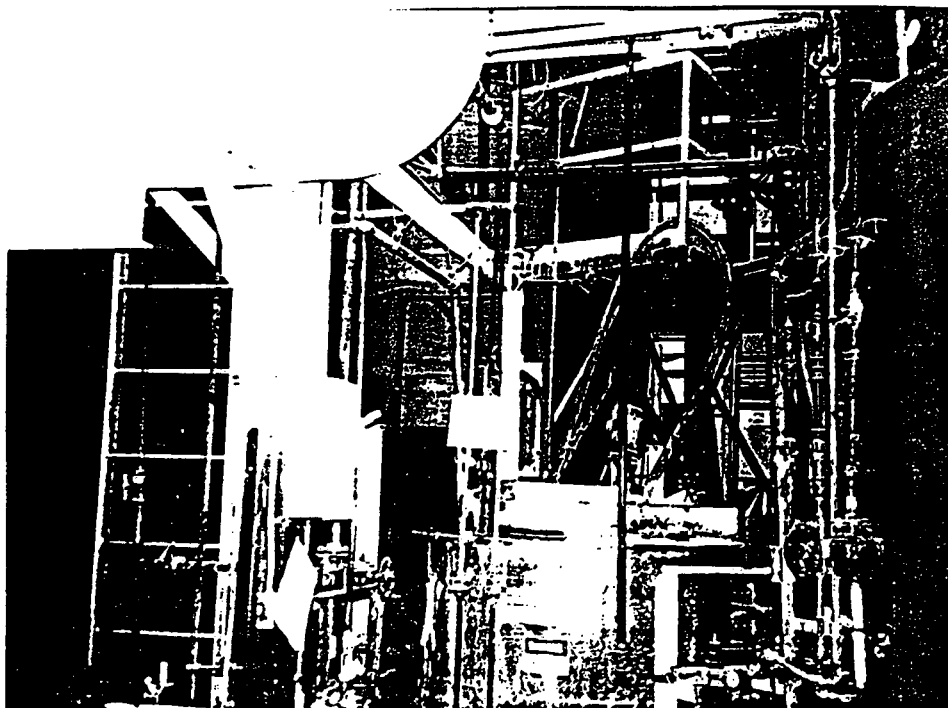


Photo No. 1-9: View, facing east, of Lime Slurry Tank and Zinc Batch Treatment Tank (SWMU 16) located in building TR-20.

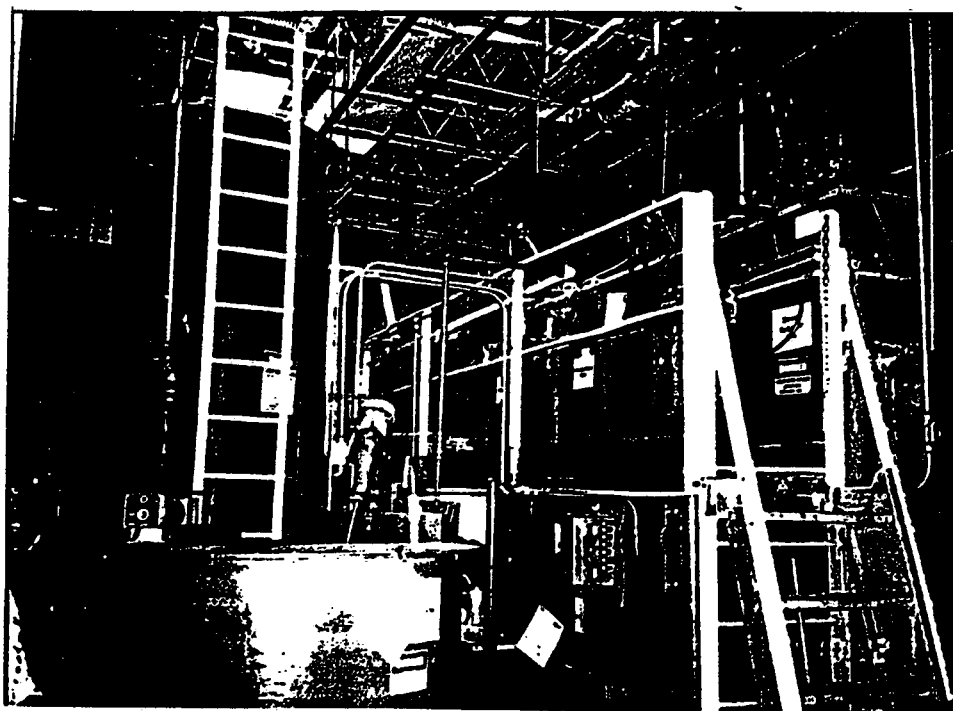


Photo No. 1-10: View, facing northwest, of Chromium Reduction Tank, pH Reduction tank, 'Flop' Tank and Secondary Settling Tank (SWMU 16) located in building TR-20.

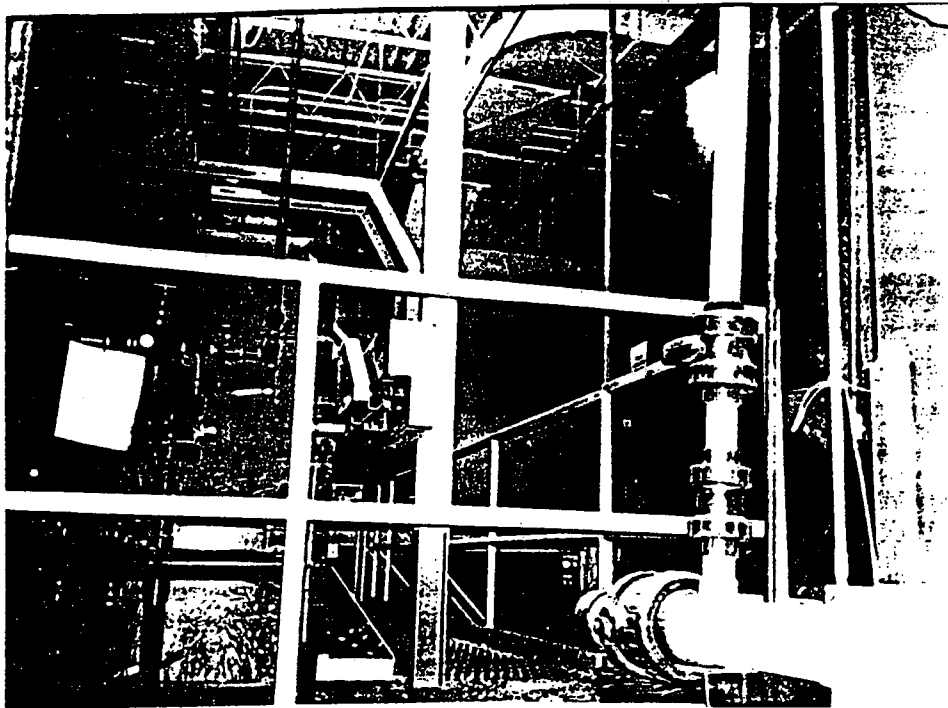


Photo No. 1-11: View, facing north, of Filter Press and Primary Settling Tank (SWMU 16) located in building TR-20.

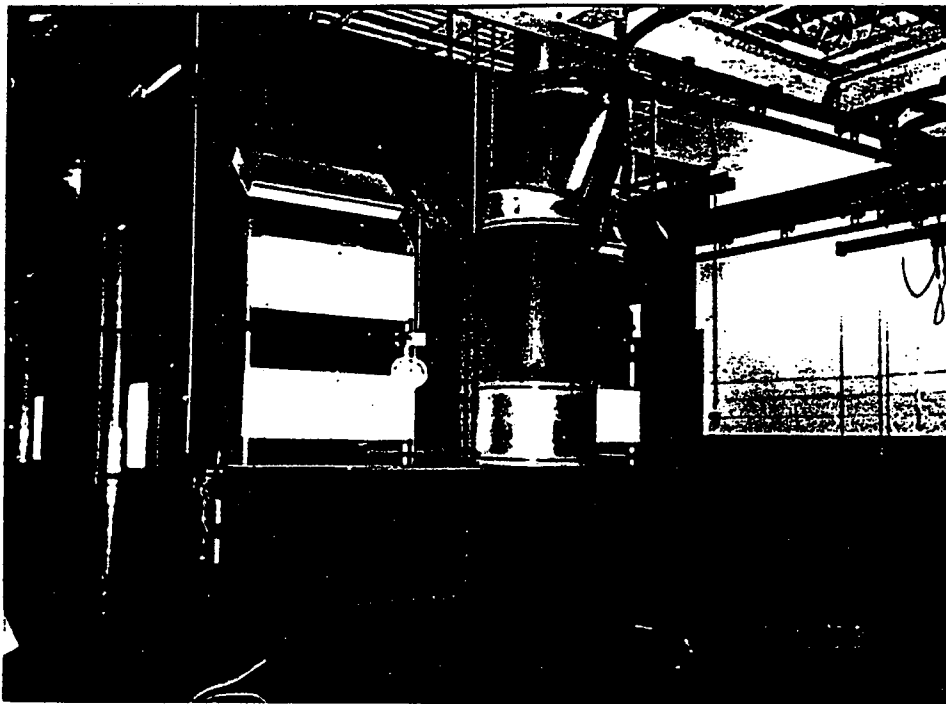


Photo No. 1-12: View, facing north, of Dry Filter Paint Unit and Filter Booth (SWMU 14) located in building TR-20.

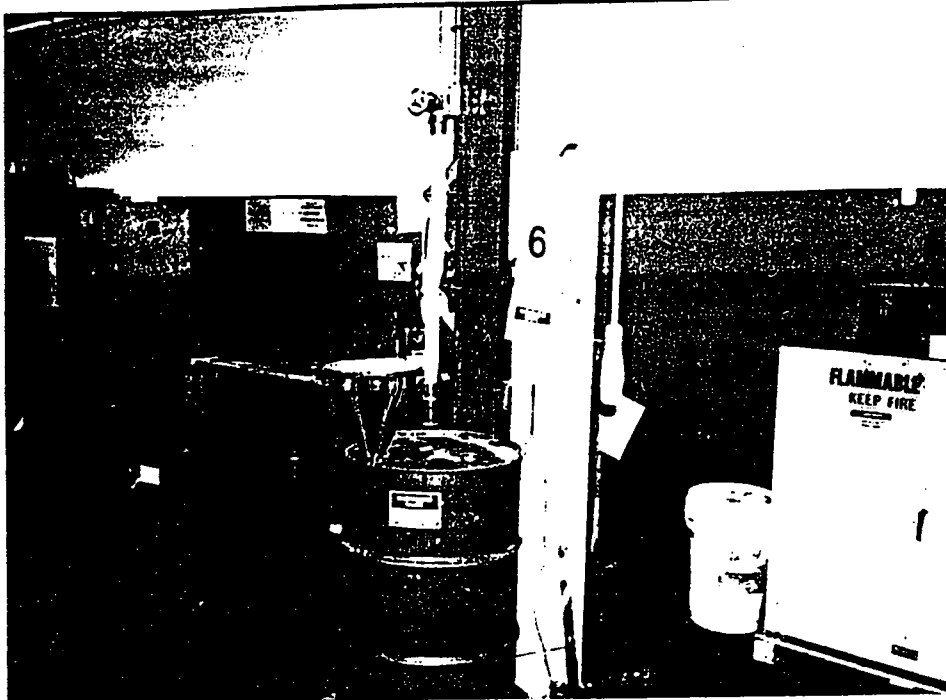


Photo No. 1-13: View, facing south, of Satellite Accumulation Area (SWMU 12) showing a 55-gallon drum containing paint solvents and thinners. Note proper labels and concrete containment. This unit is located in building TR-20.

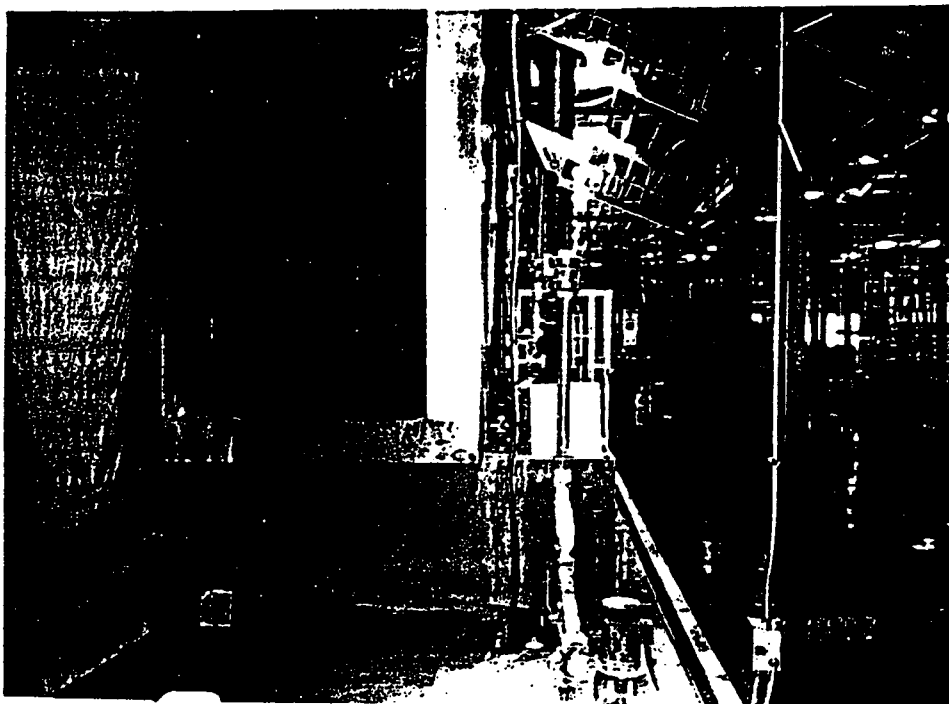


Photo No. 1-14: View, facing south, of Alkaline/Acid Cleaning Units (SWMU 13) located in building TR-20.

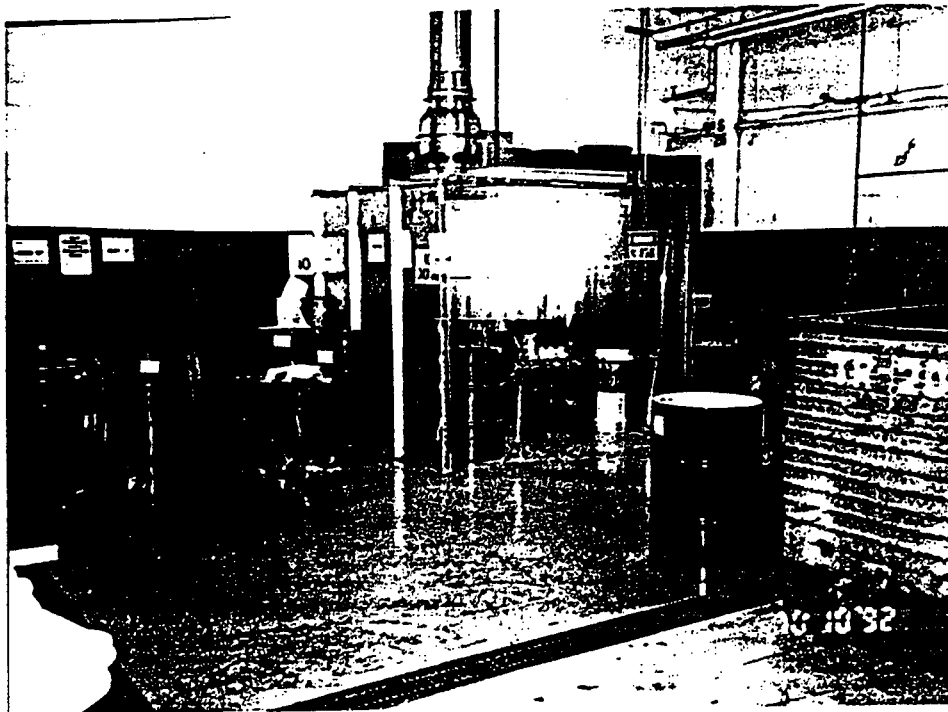


Photo No. 1-15: View, facing east, of 'Drop Zone' Satellite Accumulation Area (SWMU 12) located in building TR-20. This unit is used to recover liquid wastes and 'paint can heels'. Note concrete containment and blind sump drain.

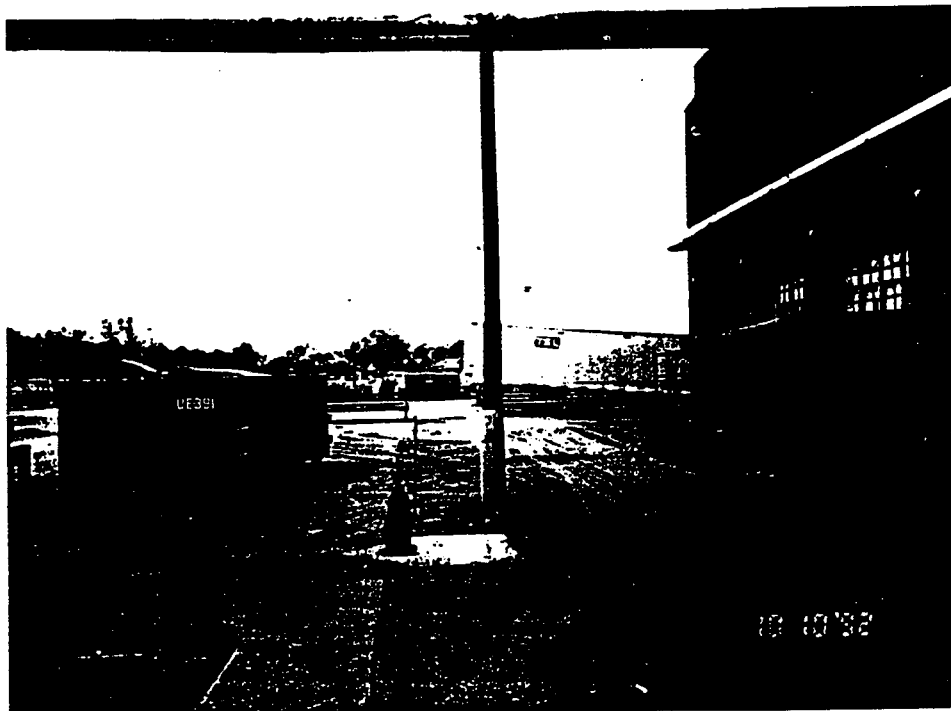


Photo No. 1-16: View, facing southwest, of Scrap Metal Storage Area (SWMU 11). This unit is located outside adjacent to building TR-5.

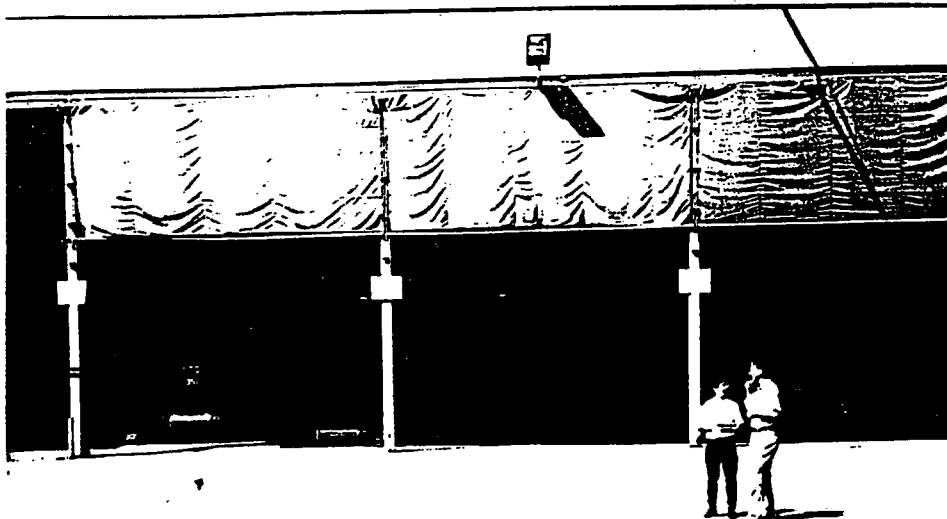


Photo No. 1-17: View, facing west, of TR-5 Shed, which houses nonhazardous paint debris, aluminum chips, Speedy Dry and oil debris.



Photo No. 1-18: View, facing south, of Tanker Plaza used to store spent coolant in trucks in the 1960's and 1970's.

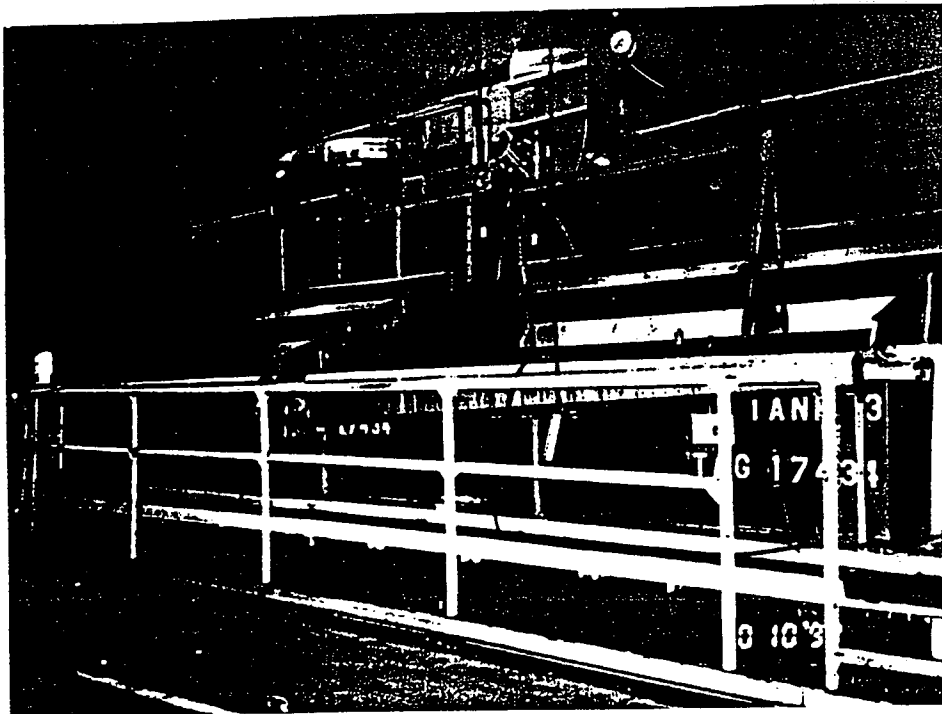


Photo No. 1-19: View, facing northwest, of Acid/Alkaline Tanks #3 and #4 (SWMU 10) used in metal cleaning process. These are steel tanks with a capacity of 6000 gal/each and are located in building TR-1 adjacent to Acid/Alkaline Tanks #1 and #2.

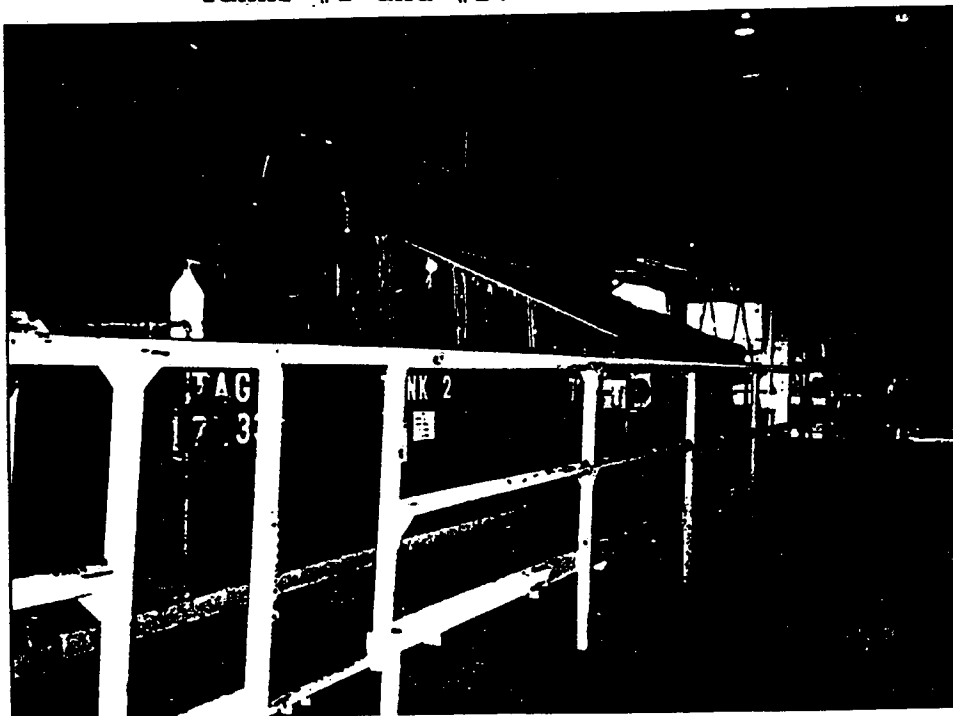


Photo No. 1-20: View, facing north of Acid/Alkaline Tanks #1 and #2 (SWMU 10) used in the metal cleaning process. These are steel tanks with the capacity of 6000 gal/each and are located in building TR-1. Note concrete containment.

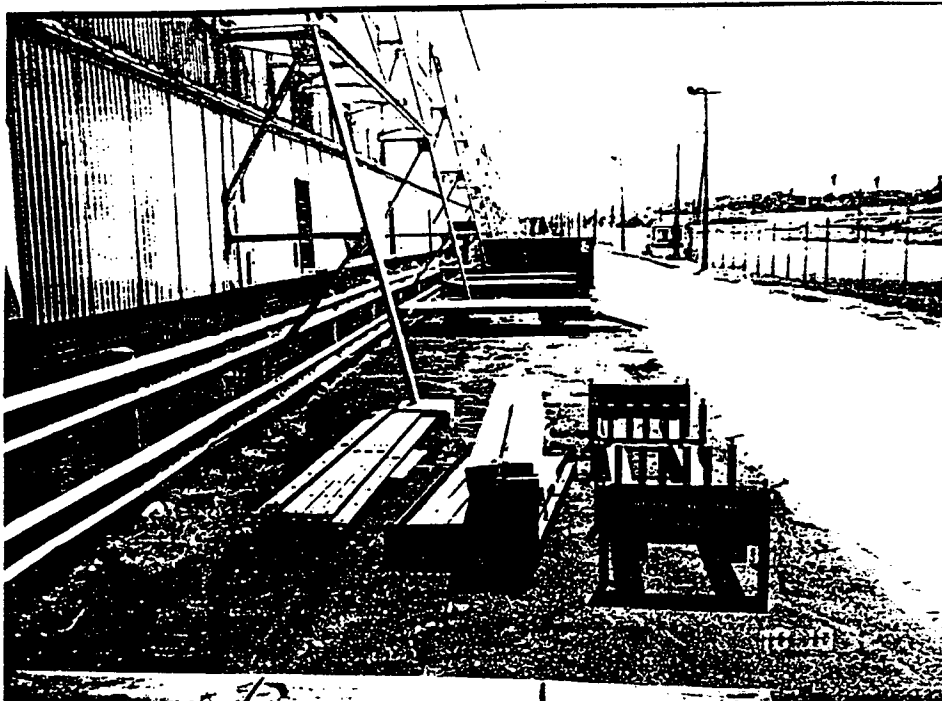


Photo No. 1-21: View, facing south, of former storage tank area (SWMUs 5 & 6). Two 8000 gal. in-ground concrete tanks were removed from here in the late 1970's. These tanks were used to store acid/alkaline solution and are located adjacent to the east side of building TR-1.

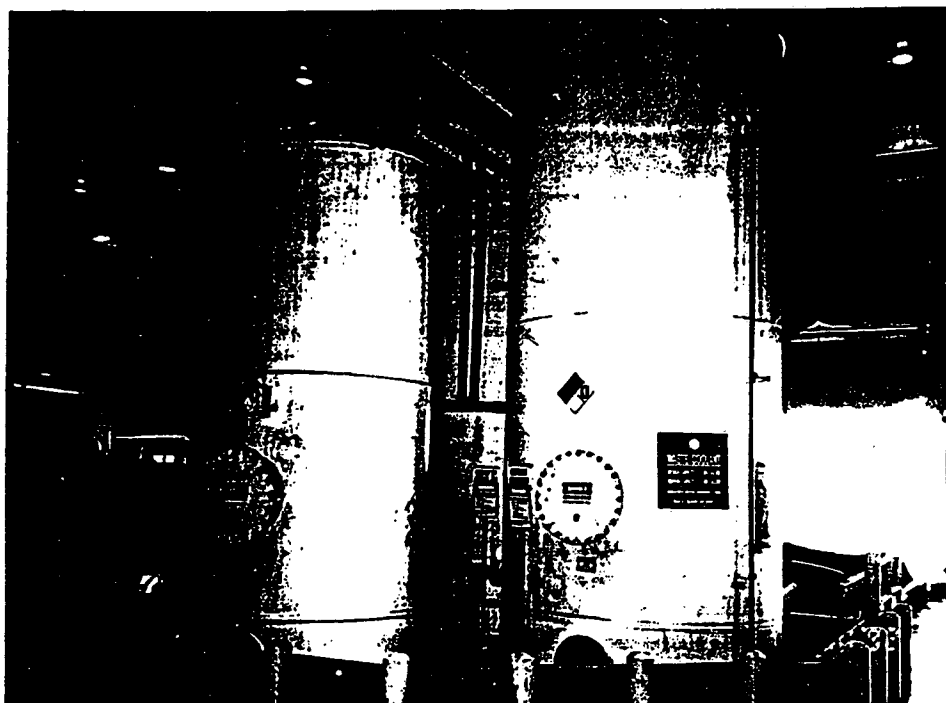


Photo No. 1-22: View, facing south, of Bulk Tank Area (SWMU 9) used to store waste oil, coolant and acid/alkaline solutions. These tanks are located in building TR-1. Note concrete containment wall around tanks.

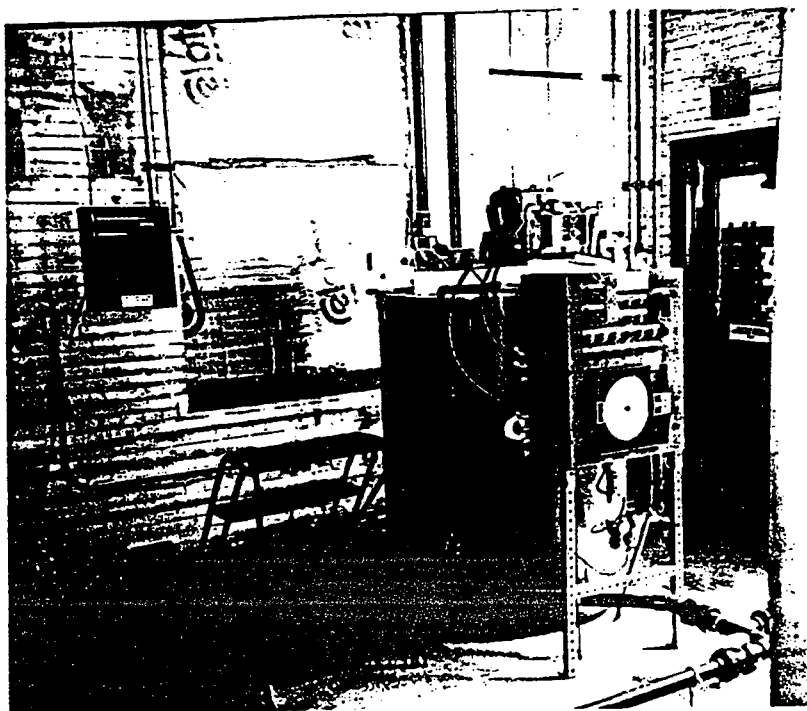


Photo No. 1-23: View, facing east, of fiberglass mixing tank which mixes blowdown with sulfuric acid for neutralization. The tank has a capacity of 500 gal. and is located in building TR-13.



Photo No. 1-24: View, facing southeast, of two fiberglass 3000 gal. tanks containing sulfuric acid. These tanks are located in building TR-13.

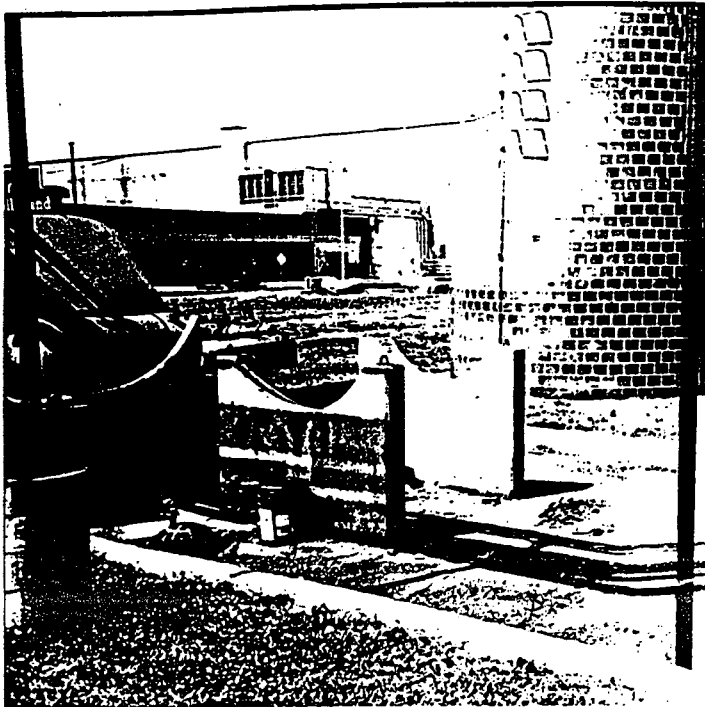


Photo No. 1-25: View, facing southeast, of former above ground waste oil tank area (SWMU 7) located adjacent to building TR-13. Tanks were taken out of service in the late 1970's. Note concrete containment.

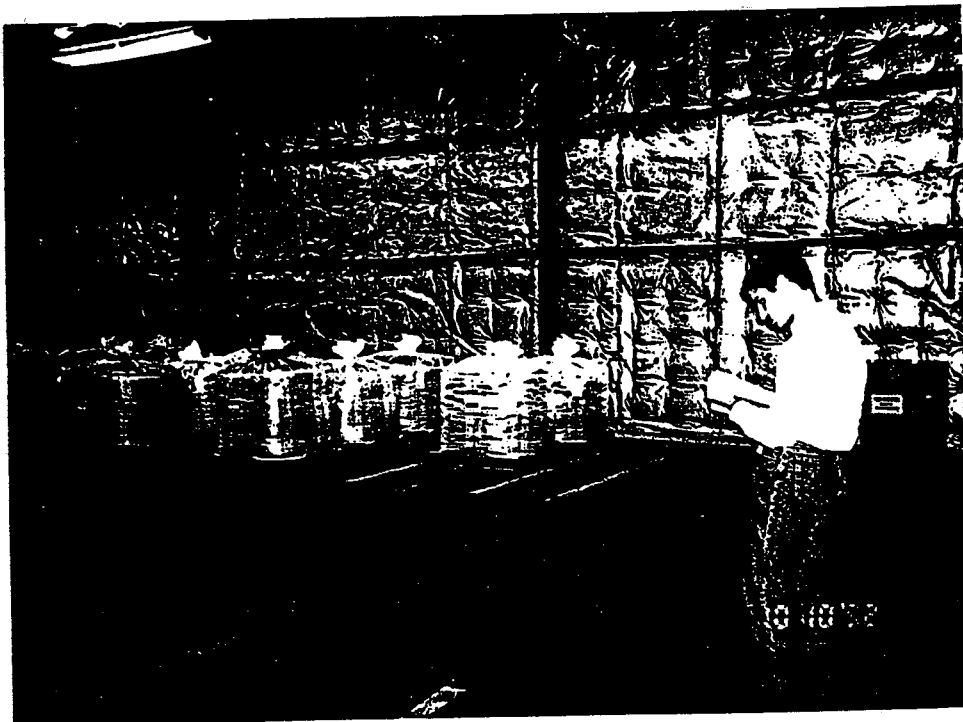


Photo No. 2-1: View, facing northeast, of Less-Than-90 Day Storage Area (SWMU 8) located in building TR-23. Storage area is used to store all hazardous wastes on site. Note concrete containment with 3"-4" berm and blind sump.

APPENDIX B
Visual Site Inspection Field Notebook

Visual Site Inspection

8/22/96

G100 R02036-01-03

Carrier Corporation

Carrier Parkway

Syracuse, New York

EPA ID# NYD001317072

VSI Team Members

Bill Goold - A.T. Kearney inc. New York project office

Rob Stringer - AT. Kearney inc Dallas office

Brian Rodgers - NYDEC - Syracuse, NY



8/22/96

Robert J. Cramer

855 R Stringer and B. Goolcl arrive at Carrier Corporation Facility - Syracuse, NY
Weather: Temperature - Low 80's, partly cloudy - Surrounding land use is primarily ^{is} industrial and commercial. Topography - relatively flat - no surface water bodies in sight.

910 Introduction meeting with facility representatives Richard Bianchi, Nelson Wong and Beth Hubben. Discussed Purpose of RFA and objectives of VSI. Discussed HHS considerations.

920 Discussion of Notification letter and information needs. Looked over facility map for brief orientation of facility layout. Four areas of MFC and ~~of~~ waste management were identified - buildings TR-1, TR-2, TR-3 and TR-20.

933 Began discussing waste management processes

- ① Machining Process - Oils + greases - wastes shipped off site
- ② Cleaning Operations - water-based alkaline materials pretreatment in TR-20 or shipped directly off site.
- ③ Painting operations - Paint Booths - Dry filter booth and waterwash booth - wastes shipped to 90 day storage.

950 Discussed 90 day storage Area building TR-23

RJS 8/22/96

8/22/26

Robert J. [unclear]

- 955 Discussed inactive and closed waste storage tanks.
- (2) 20,000 gal. concrete tanks held waste alkalines and waste coolants. - open tanks
(2) 5000 gal tanks held waste oils and TCE
- installed in 1979. - steel tanks
(2) 8000 gal. concrete tanks adjacent to TR-1 contained alkalines + waste coolants
- 5 monitoring wells were installed '86-'87 as part of closure activities

1006 Went over illustrated diagram of specific waste management areas.

1030 Set out for facility tour with Mr. Bianchi, Mr. Wong and Mrs. Hubben.

1038 Surveyed area of former storage tanks

1039 RI P1 - Photo facing NE - showing location of former storage tanks

1042 RI P2 - Photo facing south of monitoring wells in former storage tank area.

1050 Entered building TR-3

1052 RI P3 - Photo facing NW of (2) SPDES Treatment tanks and air stripping units - which receive water from storage drain - Installed 1990
350,000 gal/day - dry weather - Concrete containment.

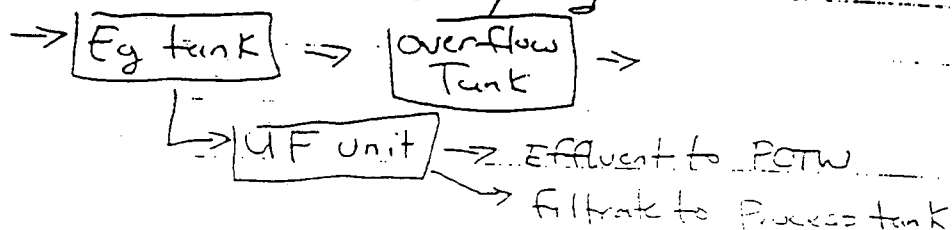
RJS 8/22/96

8/22/96

Robert J. [Signature]

1056 R1 P4 - Photo facing North of Wet Wells
- installed in 1990.

1058 R1 P5 - Photo facing West of Ultrafiltration Unit.
- used to filter cooling fluid
- capacity 10,000 gal/day



1102 R1 P6 - Photo facing North of equalization tank, process tank, overflow tank and Used oil tank. - Concrete floor -

1103 R1 P7 - Photo facing NW of (same as above) overflow & used oil tanks

1105 R1 P8 - Photo facing SW of interim storage tank - used for collection of used oil and coolant. These tank have been in this location since 1994.

1112 Arrived at Building TR-20 which houses water pre-treatment plant - installed in mid 1980's

1115 R1 P9 - Photo facing East of Lime Slurry tank and Zinc batch treatment tank.

1116 R1 P10 - Photo facing NW of Chromium reduction tank, pH reduction tank, 'flop' tank and secondary settling tank

R&S 8/21/96

8/22/96
[Signature]
[Signature]

1117 RI P11 - Photo facing North of Filter Press
+ primary settling tank.

1120 Arrived at building TR-20 (Jet Set Paint Booth)

1122 RI P12 - Photo facing ~~South~~^{North} of Dry filter paint
booth + filter booth.

1124 RI P13 - Photo facing south of waste Accumulation
Area - ~~6~~ 55 gal. drum on Roll-up
wastes - paint solvents + thinner
- Concrete Containment.

1127 Arrived at Powder Paint Booth

1129 Surveyed Pre-cleaning Powder Unit Alkaline/Acid
Cleaning Units

1131 RI P14 - Photo facing South of Alkaline/Acid
Cleaning Units with elevated piping which
flows to treatment unit. Prior to 1984
had dip tanks for previous cleaning process
and waste was sent to former storage tanks.

1138 Arrived at 'Drop Zone'

1140 - RI P15 - Photo facing East of liquid waste Processing
Unit - where paint can 'beels' are recovered.
55 gal. drum on roll-up - Concrete containment
with sump. - Waste is sent to 90 day
Storage Area.

Pgs 8/2/96

8/22/96

Robert G.

- 1148 RI P16 - Photo facing SW of Scrap metal
Storage Area - Outdoors - Concrete Area
- In existence since 1995.
- 1151 Arrived at Building TR-5 shed - housing nonhazardous
paint debris, Aluminum chips, Speedy Dry + oil
debris.
- 1152 RI P17 - Photo facing West of TR-5 shed
- In existence since ca 1987 - Concrete Container
- wastes disposed of off site.
- 1155 Surveyed Empty barrel storage Area
- 1210 Adjourned for Lunch
- 1302 Set out for building TR-2
- 1316 Surveyed Tanker Plaza
- 1317 RI P18 - Photo facing South of Tanker Plaza
- used to store spent coolant in 1960's + 70's
- large Paved area.
- 1326 Arrived at building TR-1 - surveyed acid tanks
and alkaline tanks (4) steel tanks - 6000 gal/each
- 1328 RI P19 - Photo facing NW of acid/alkaline tanks
tanks # 3 + #4.
- 1329 RI P20 - Photo facing North of Acid/Alkaline tanks
tanks # 1, and #2
- 1331 Surveyed area of former 8,000 gal storage
tanks - tank removed in Late 1970's
- 1332 RI ~~P22~~
P21 - Photo facing south of former Storage tank
sites. Tanks contained Acid/Alkaline solution.
- 1336 Arrived at Building TR-1 - surveyed Storage tanks
'Bulk tank Area' - containing waste oil, coolant
and Acid/Alkaline solutions.

RJS/gh/10

Robert S. [unclear]

6/22/96

1339 R1 P22 - Photo facing South of Bulk Tank Area.
- used oil tanks get pumped out Quarterly
- Alkaline / Acid + Coolant tanks get pumped out monthly and are transferred to U.F. unit.

1344 Arrived at TR-1 drop zone
housing non hazardous materials and 1 barrel of Hazardous paint waste (POG).

1347 Arrived at TR-13 - Neutralization tanks
(2) 3000 gal Fiberglass Sulfuric Acid tanks

1348 R1 P23 - Photo facing East of fiberglass mixing tank which mixes blowdown with H_2SO_4 to ~~neutralize~~ neutralize. Approx. 500 gal.

1350 R1 P24 - Photo facing SE of fiberglass 3000 gal tank containing Sulfuric acid

1351 R1 P25 Photo facing SE of former above ground waste oil tank area - taken out of service in Late 1970's. Concrete berm containment - Currently somewhat stained but intact.

1353 Arrived at TR-23 - 90 day Storage Area
- stores Filter cake + all other wastes generated ^{Haz.} on site.

RJS 8/22/96

Robert J. Smith

8/22/96

1356 R1 P26 - Photo facing ~~east~~^{NE} Northeast of
90 day Storage Area (last photo on film roll)

1357 R2 P1 - Photo facing northeast of 90 day
Storage Area - Concrete base with 3"-4" berm
around entire area with blind sump to collect
spills. ^{PS}

1405 Closeout meeting - R2 P2 - Photo of waste management diagram

1420 Concluded close out meeting.

1425 Departed facility.

R/S 8/22/96

ATTENDEES:

RICHARD BIANCHI, NELSON LONG, BETH ARDEN - CARPARK
BRIMM ROGERS - DEC

①

4 MFG OPERATIONS TR 1, 2, 3, + 20

TR-1 - MFG LG. CENTRIFUGAL REFRIG EQUIP. MOSTLY ASSEMBLY, A LITTLE
CLEANING + PAINTING

TR-2 - PARTS DISTRIBUTION ALSO MAKE REPLACEMENT COPPER + ALUMINUM COILS

TR-3 - MFG. COMPRESSORS - A LOT MACHINE OPS + PAINTING - GENERATE CUTTING
OILS, PAINT WASTES

TR-20 - MAKE CONTAINER REFRIGERATION UNITS FOR SHIP CARGO CONTAINERS
MAINLY FABRICATION OPERATIONS, CLEANING, PAINTING, TESTING.

CLEANING,
MACHINING,
PAINTING

IN PAST

FACILITY WAS BUILT BY G.E. ~ IN 1942 FOR DEFENSE PURPOSES

CARRIER MOVED IN LATE 20s, EARLY 50s - FORMERLY THERM KING

TR-1 ALWAYS MADE CHILLERS - ALWAYS BEEN MANUFACTURING (MACHINING,
CLEANING, PAINTING)

USE

MACHINING WASTES:

WATER SOURCE COOLANTS + CUTTING OILS

WASTES HANDLED IN 2 GENERAL WASTES

HAVE CENTRAL COOLING UNIT FOR SOME LG. MACHINES, AFTER COOLANT
REACHES USEFUL LIFE, SENT THROUGH ULTRA FILTRATION, EFFLUENT GOES TO
POTW, FILTRATE GOES TO TANK, OIL SENT OUT FOR RECYCLING, SLUDGE IS
ALSO RECYCLED

CURRENT
OPS

50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS

22-141
22-142
22-144



OTHER SMALLER UNITS HAVE OWN SELF CONTAINED COOLING

MOST MACHINING IN TR-3

COOLING IN TR-1

HAVE WASTE OIL TANK IN TR-1 + TR-3 - WASTE OIL SHIPPED OFF SITE

CLEANING

CURRENTLY USE WATER BASED ALKALINE CLEANERS CLEANING TANKS ARE GENERALLY CONTINUOUS OVERFLOW W/ SOME PRETREATMENT

HAVE MAJOR PRETREATMENT OPERATION IN TR-20 W/ FLOCCULATION + FILTER PRESS

HAVE VARIETY OF STAND ALONE CLEANING TANKS

USED TO HAVE VAPOR DEGREASERS W/ TCE - TCE WAS RECYCLED W/ FILTRATE BEING SHIPPED OFF SITE

PAINTING

HAVE 2 CONVEYOR BELT ELECTRIC DEPOSITION PAINTING PROCESSES

HAVE 2 TYPES OF PAINT BOOTH

- DRY FILTER BOOTH
- WATER WASH BOOTH

WATER FROM PAINT BOOTH IS FILTERED

TR-23 HOUSES 90-DAY STORAGE FACILITY FROM M-20 HAZ + NON HAZ WASTES + FILTER CAKE FROM TR-20 TREATMENT PROCESS

BEFORE 1979 - WASTES WERE STORED OUT DOORS IN SAME AREA WHERE BLDG IS NOW

HAD 2, 20,000 GAL ^{NOT USED UNTIL MID-LATE-20s} OPEN IN-GROUND TANKS TO HOLD USED ACID OR ALKALINE CLEANING SOLUTIONS + WASTE COOLANT

ALSO WERE 2 8,000 GAL ^{STEEL} TANKS ONE FOR WASTE OIL, ONE FOR WASTE VAPOR DEGREASER ^{INSTALLED '20-'29}

ALSO HAD 2 SMALLER 8,000 GAL CONCRETE IN-GROUND TANKS ADJ ^{AC} TO TR-1 ^{EAST SIDE} WERE CLOSED BEFORE BIGGER TANKS STARTED BEING USED

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



BOTH
LOCATED
IN PATH OF
TR-6

HAVE POST-CLOSURE 5 MONITORING WELLS - ONE UPGRADIENT AT SOUTH END OF THE FACILITY, 2 WELLS (1 DEEP, 1 SHALLOW) ADJACENT TO TREATMENT AREA ONE N. OF TR-1, + 1 AT N.E. CORNER OF FACILITY. ASSUMED GRADIENT IS TOWARDS N, NE

HAVE SEEN SPORADIC TCE + BREAKDOWN PRODUCTS IN SHALLOW WELL NEAR TR-6 + SOME AT WELL NEAR TR-1

GOES TO LAKE CREEK, TO ONAWAGO LAKE

HAVE SPDES PERMIT TO DISCHARGE TO SANDERS CREEK, SMALL CREEK THAT RUNS ALONG N. SIDE OF FACILITY - HAVE TWO PERMITTED DISCHARGE PTS N SIDE OF TR-3 + TR-2. ALL REGULAR FLOW IS TREATED BEFORE DISCHARGE

HAVE OVERFLOW DISCHARGE FOR LARGE STORMS

USED TO STAGE WASTE COOLER IN TANKERS WRING 60th/20th 1. OF TR-2 TR-3

USED TO HAVE 500 GAL ABOVEGROUND WASTE OIL TANK WHICH HELD WASTE OIL TO BE BURNED IN BOILERS IN TR-10

HAVE 5 DUMPSTERS USED TO HOLD SOLID WASTE S. OF TR-1

HAD A SPILL OF ~25,000 GAL OF NaOH (OVERFLOWED FROM TANK, WENT INTO STORM SEWERS + OUT INTO CREEK)

FACILITY IS 187 ACRES - 4500 PEOPLE - GET WATER FROM CITY WHOSE WATER COMING FROM SW SOURCES

NO KNOWN USES OF GW IN AREA

GW WAS SHALLOW

PAST ENFORCEMENT ACTIONS

PCB INSPECTION IN '80 RECORDS VIOLATION

HAD CONSENT ORDER TO INSTALL PRETREATMENT FOR SPDES DISCHARGE INTO CREEK BECAUSE OF EXCEEDANCES OF TCE +

SOURCE IS LIKELY GW INFILTRATION INTO STORM SEWER SYSTEM ORIG FROM COATED TANKS

ATTACHMENT 3

SUMMARY OF PRE-1980 INDUSTRIAL WASTES

CARRIER CORP. THOMPSON ROAD FACILITY

WASTE TYPE	DESCRIPTION	LOCATION
Mixed acids & alkalis	Equal volumes of sulfuric acid (10%) and alkali cleaner (sodium hydroxide 20 oz./gal.) acid contains 5wt% iron; cleaner contains metasilicates and resin type soaps	North Tank, west of TR-1
	Mix of acidic and alkaline cleaners, approx. 70% volume is inhibited phosphoric acid and sodium hydroxide. Remainder is phosphates, nitrates, silicates, etc.	North Tank, north of TR-6 (1)
Water soluble coolant	Mixture of water emulsion coolants such as cimcool, tooleze, swan, etc. Average 25 parts water to 1 part coolant.	South Tank, west of TR-1 (2)
		South Tank, north of TR-6 (1)
Solvents and thinners	Mixture of organic solvents (toluene, zylene, MEK, etc.) with less than 5% alkyd or acrylic paint pigment and resins (from paint spray equipment cleaning)	Drum storage area (3)
Solvent based paint	Waste alkyd or acrylic paints approx. 50% solids, 50% thinner from flow coat tank cleaning or from paint pots	Drum storage area (3)
Solder flux	70% flux, 30% n-propyl alcohol. Flux contains chloride and fluoride salts	Drum storage area (3)
Liquid sludges (misc.)	Approx. 50% of sludge consists of sulfate and other acid salts in concrete pits; 50% of sludge is phosphate salts from zinc phosphating machine, and miscellaneous other sludges	Concrete tanks near TR-1 and TR-6; drum storage area (1)

Notes:

- (1) TR-6 concrete tanks were not used until 1978. Until then, all mixed acids and alkalis were collected in the north concrete tank near building TR-1, and all water soluble coolants were collected in the south concrete tank near building TR-1.
- (2) In 1978 this tank was used to store mixed acids and alkalis.
- (3) This includes the North Plaza collecting point on the east side of building TR-2, where paint sludges and grinding sludges were collected, as well as the area west of building TR-14, where other drummed wastes were accumulated prior to off-site disposition.